

Assessing Medical Bed Utilization among Women in the CDCR

Final Report

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Brie Williams, MD, MS & Cyrus Ahalt, MPP
The Criminal **Justice & Health Program at UCSF**

with

Rebecca Brown, MD, MPH

Michele Casadei, BS

Rachel Ekaireb, BA

Lori Holleran, PhD, MPH

Heather Leutwyler, RN, PhD, FNP

Alicia Neumann, PhD, MPA

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The Women's Health Program of California Correctional Health Care Services

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BACKGROUND

This Report

In June 2017, the Women’s Health Program of the California Department of Corrections and Rehabilitation (CDCR) and California Correctional Health Care Services (CCHCS) engaged the Criminal Justice & Health Program at the University of California San Francisco (UCSF) for an independent assessment of medical bed utilization at women’s facilities. The project was developed in response to a growing concern that medical bed resources for women in California prisons may be limited in number and type and/or inefficiently allocated. In response, the UCSF team has identified opportunities to better meet the needs of an aging and increasingly medically complex patient population and, in doing so, optimize medical bed use in women’s facilities.

This final report describes recommendations, and supporting evidence, designed to:

- (1) cost-effectively optimize medical bed resource use across the CDCR’s women’s facilities, and
- (2) enable a greater proportion of the growing medically vulnerable, chronically ill, and/or seriously ill patient populations to be housed in the general population or in newly created lower level of care medical beds that are less resource-intensive than currently available medical beds.

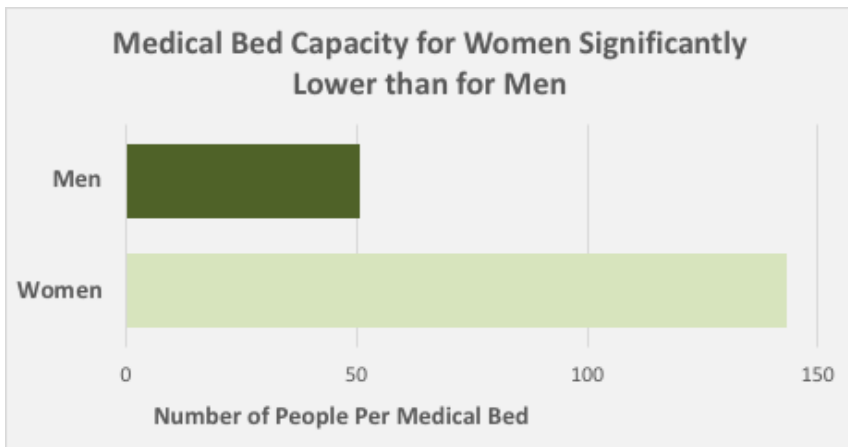
These recommendations are based on the following activities undertaken over the course of this project:

- Review of the relevant literature on risk stratification, levels of care, promoting independence in an aging and/or chronically ill population, gender-responsive care, and palliative and hospice care;
- Review of relevant department and facility policies, procedures, and definitions;
- A targeted landscape analysis of CDCR and CCHCS resources outside the women’s facilities;
- An analysis of relevant community resources, including a review of policies aimed at transitioning medically vulnerable and/or seriously ill patients to the care of the community;
- Interviews with central office CCHCS leadership and clinical leadership and staff at CIW and CCWF;
- Interviews and medical chart reviews of a 15% sample of “high risk” patients at CIW and CCWF;
- Focus groups with prisoner leadership groups; and
- Death reviews for all women’s deaths from April 1, 2016 through March 31, 2018.

This final report focuses on key recommendations, including the proposal of new “levels of care” to extend the reach and range of the women’s health care system beyond current outpatient clinics and CTC, SNF, and OHU beds.

Women’s Medical Bed: A Scarce Resource

In 2013, the CDCR opened the California Health Care Facility (CHCF) in Stockton, CA to provide housing and health care to over 2,500 of the state’s most medically vulnerable prisoners with serious and/or long-term health care needs. The California Medical Facility (CMF) constitutes a second CDCR prison facility committed to caring for patients with complex health care needs and includes the system’s only dedicated Hospice housing unit. In addition, most men’s facilities provide a mix of outpatient housing unit beds, specialized outpatient beds, and/or correctional treatment center beds. According to a 2015 survey of total active health care beds by institution, there were a total of nearly 2400 medical beds for men.



Women do not have access to beds at CHCF, CMF, or in the CMF hospice. Rather, two facilities, Central California Women’s Facility (CCWF) and the California Institution for Women (CIW), are responsible for housing and providing health care to nearly all patients with complex/serious mental or physical health conditions in the system.¹ At the time of the 2015 health care bed survey, the women’s system had 40 medical beds (all counts

exclude mental health beds; an additional 10 outpatient housing beds are expected at CIW in 2018). Overall, women have access to fewer than half the number of medical beds per capita than do men (see Figure at left).

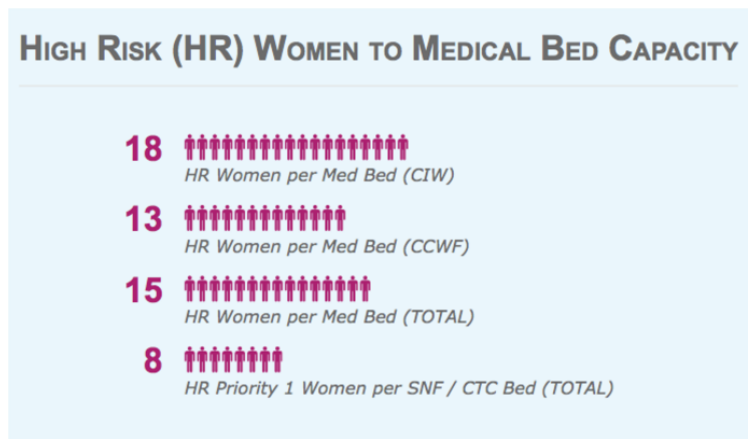
Medical beds are assigned by institutional staff on the basis of patient need and system capacity and reviewed and/or managed by the Health Care Placement Oversight Program (HCPOP). To help in making placement decisions, patients are assigned a medical risk classification based on factors including but not limited to: level of care need; clinical risk assessment; intensity of nursing care need; functional capacity; proximity to consultation services; and/or need for specialized services (e.g. hemodialysis, pregnancy).

Most patients in the CDCR receive one of four medical classifications: low risk, medium risk, high risk priority 2, or high risk priority 1. Some risk factors used to classify patients as high risk (1 or 2) are directly related to medical bed utilization, such as need for a higher level of care or a recent prolonged stay in a medical bed. Other factors commonly associated with a high risk classification are likely to pose challenges to living in a general population bed, and thus increase a patient’s likelihood of requiring alternative housing based on medical need (e.g. managing 13 or more medications, requiring specialty consultations. The table below shows 50 women’s medical beds by type alongside the number of high risk patients at each facility at the end of 2017.

	Medical Beds	Type	Patients Served	High Risk Patients
CCWF	26	<u>Skilled Nursing Facility (SNF)</u> , all licensed beds	Require 24-hour inpatient care with continuous access to skilled nursing care	345
CIW	8	<u>Correctional Treatment Center (CTC)</u> , licensed beds	Do not require acute care but have health care needs that would require inpatient treatment in the community; 5 “swing beds” can be used for MH crisis	427
	16	<u>Outpatient Housing Unit (OHU)</u> (10 of 16 <i>expected</i> in 2018)	Would receive outpatient care in the community but health condition may place them at personal or security risk in a general population unit	

¹ A third facility, Folsom’s Women’s Facility (FWF), is a dedicated re-entry facility for women nearing release that rarely houses women with serious health challenges and, as a result, is not a primary focus of this project.

Medical classification is not directly tied to medical bed assignment; there is no specific medical classification applied to patients who are in, or are assessed as likely to require, a medical bed and many high risk patients (particularly high risk priority 2 patients) are unlikely to be assigned to a medical bed in the near term. However, an understanding of the current ratio of high risk women to medical beds will be helpful in assessing strategies to optimize the medical bed resource.

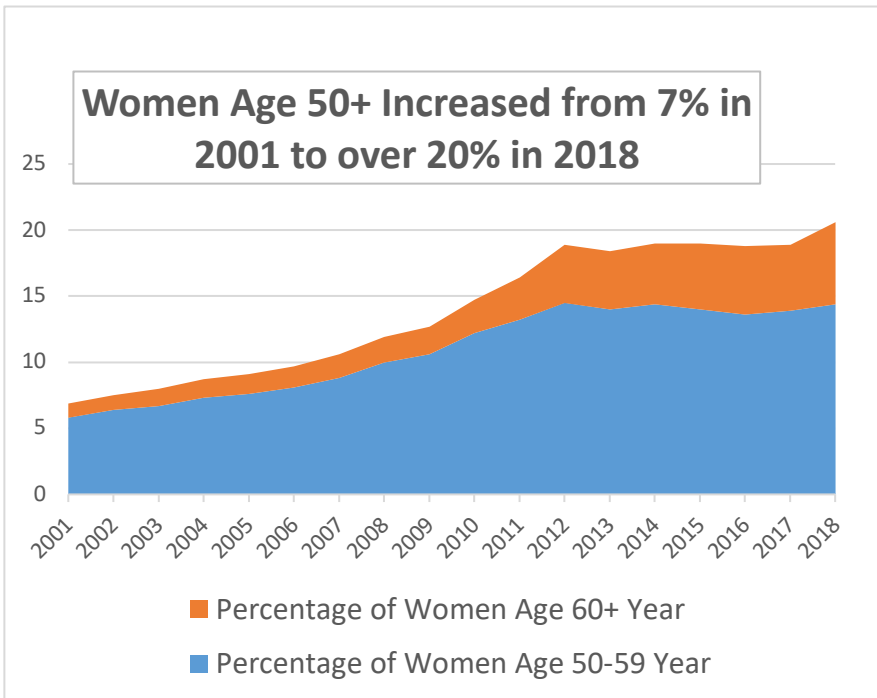


The current medical bed capacity in the women’s system has 1 medical bed available for every 15 women classified as high risk (1 or 2) (see Figure above). This ratio requires that 14 out of every 15 (93%) high risk (1 or 2) women live in the general population (or in non-medical bed housing, including mental health beds). At CCWF, 92% (12 out of 13) and at CIW, 94% (17 out of 18) high risk women must live in non-medical bed housing. The ratio is lower when evaluating available nursing care-level (SNF or CTC) beds relative to the population High Risk Priority 1 patient population with 1 bed available for every 8 such patients. This still requires that 87.5% of Priority 1 patients live in general population or other non-medical beds.

In the women’s system, medical beds are a scarce resource. In the following section, we provide an overview of the health of the system’s approximately 800 high risk women (priority 1 or 2) in the context of this scarcity.

The Women’s Population is Aging and Medically Vulnerable

Since 2001, the proportion of the women’s population 50 years of age or older has grown from just under 7% to over 20% (Figure). The proportion of women in their 60s, 70s, or 80s has increased by more than 5 times. Today, over 1 in 20 women in CDCR custody is age 60 or older. There are twice as many women in their 70s or 80s than there are nursing care level medical beds.



The percentage of women age 50-59 has remained relatively flat since 2012. Instead, continued growth in the overall proportion of older women has been driven by increases in the oldest age groups, suggesting that – absent changes in early release policy or practice – the women’s population will become increasing geriatric in the coming years.

This may reflect, in part, that more than 1 in 5 women in custody are serving life

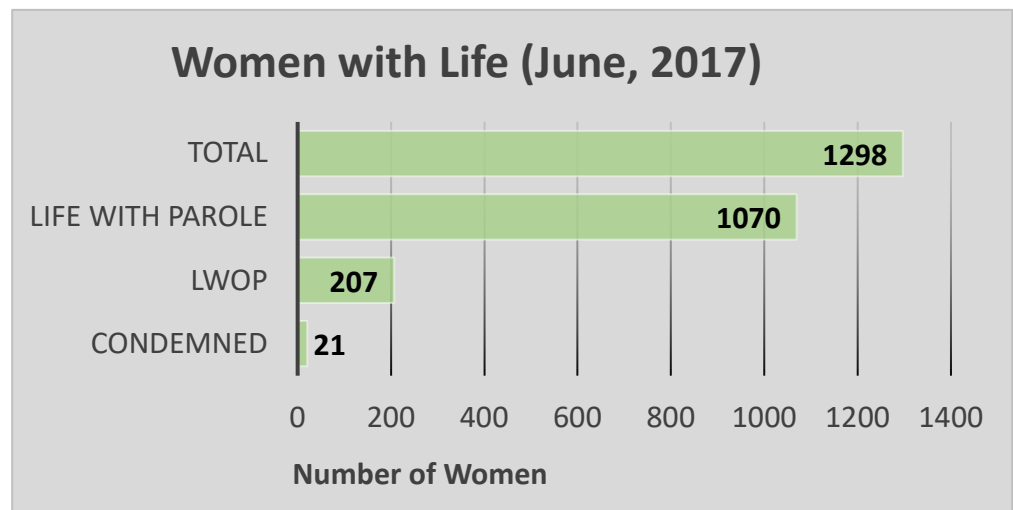
sentences² (Figure at right), including at least 228 who do not have the possibility for parole and may be expected to die in custody.

In addition to growing numbers in the older age groups, there is a considerable middle-aged cohort of women who are aging through the system.

Specifically, the number of women in their 40s (1,026) roughly matches the number of women 50 or older (1,084) and also accounts for 20% of the population. This “*middle-aged bubble*” mirrors the national trend in correctional population demographics and suggests that population aging (the proportion of the population that is “older”) is likely to accelerate in the coming years. Prison populations are generally considered “older” at age 50 or 55 because incarcerated people experience chronic illness and rates of physical disability comparable to non-institutionalized adults 10 to 15 years older.³

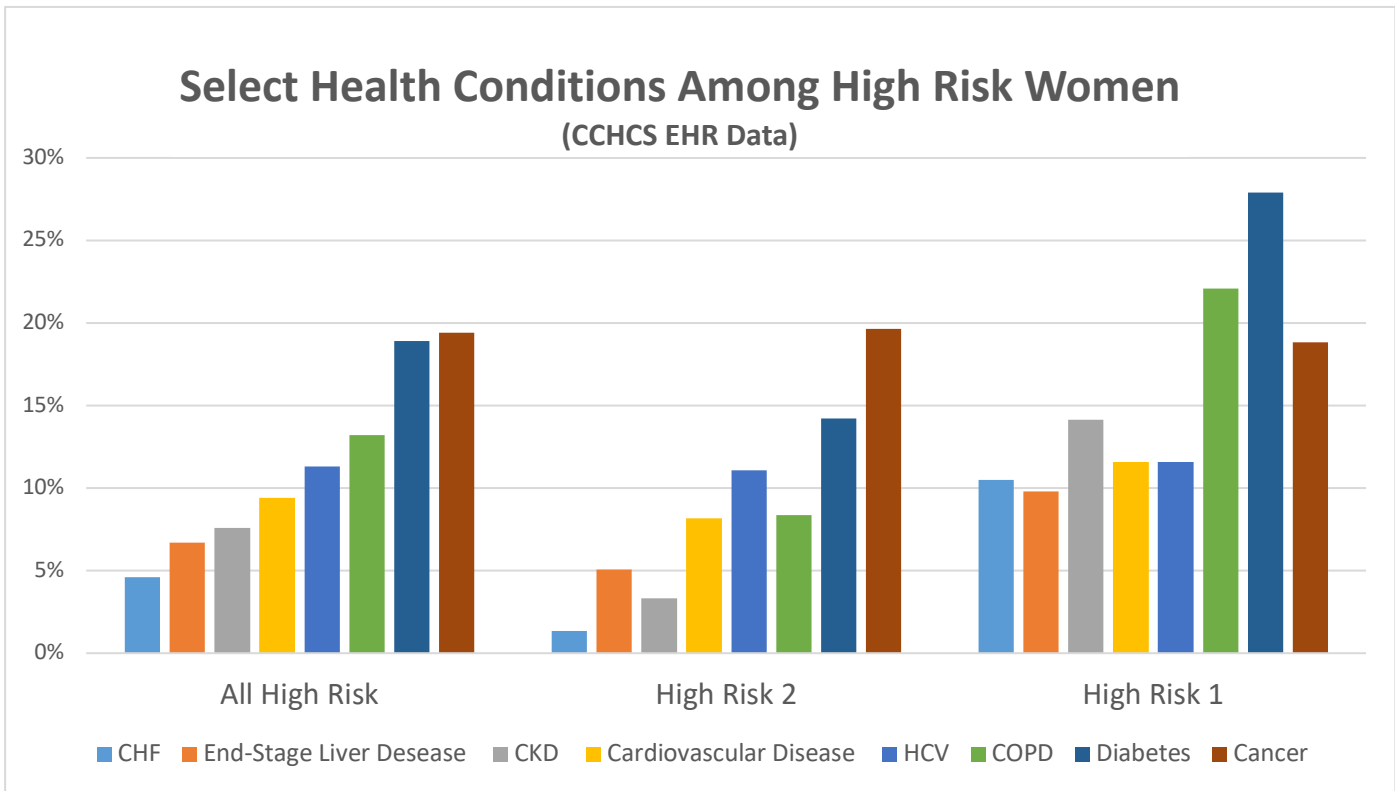
Given these demographics, it is not surprising that the women’s population today is medically complex. Nearly 65% of women have a medical risk classification greater than low (medium, high risk priority 2, high risk priority 1). In order to develop recommendations to optimize medical bed use, this report focuses primarily on data describing patients classified as “high risk” (priority 1 or 2) because they are disproportionately likely to be assigned to medical beds. From June 2017 to May 2018, more than 10% of all high risk patients (1 and 2) were assigned a medical bed compared to approximately 1.5% of medium and low risk patients.

A review of just those patients classified as high risk shows high rates of what may be considered serious illnesses (see Figure, top of next page).



² Public Policy Institute of California. <http://www.ppic.org/publication/californias-changing-prison-population/>

³ Binswanger IA, Krueger PM, Steiner JF. Prevalence of chronic medical conditions among jail and prison inmates in the USA compared with the general population. *Journal of Epidemiology & Community Health* 2009;**63**:912-919.

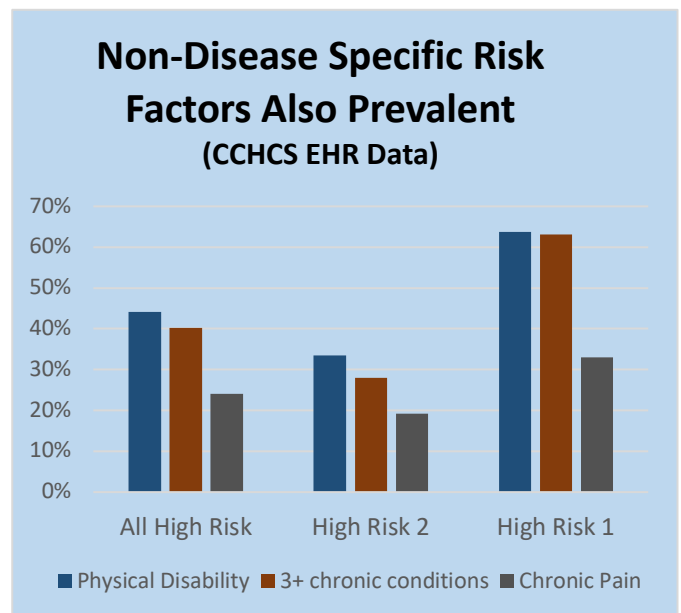


The courses that these illnesses take varies significantly, as individual patients will experience unique illness trajectories based on a number of factors. But the illnesses reported above are illnesses that are typically associated with healthcare needs beyond counseling and behavior modification and, as such, affected patients have at least one risk factor for future medical bed need in the prison setting.

In addition to these potentially serious illnesses, other factors that are likely to contribute to medical bed need – or to a patient’s inability to live independently in the general population – include co-morbidity (3 or more chronic health conditions, not including hypertension⁴), physical disability (defined as being classified as physically disabled and/or requiring an assistive device by CCHCS), and chronic pain. These are also significantly prevalent among all high risk women. (Other relevant factors associated with medical bed need will be discussed in later sections of this report.)

For this report, we conducted in-depth interviews and medical chart reviews with a representative sample of 118 high risk (1 and 2) patients, or 15% of the total high risk patient population. This sampling frame was based by necessity on the existing medical risk classification system.

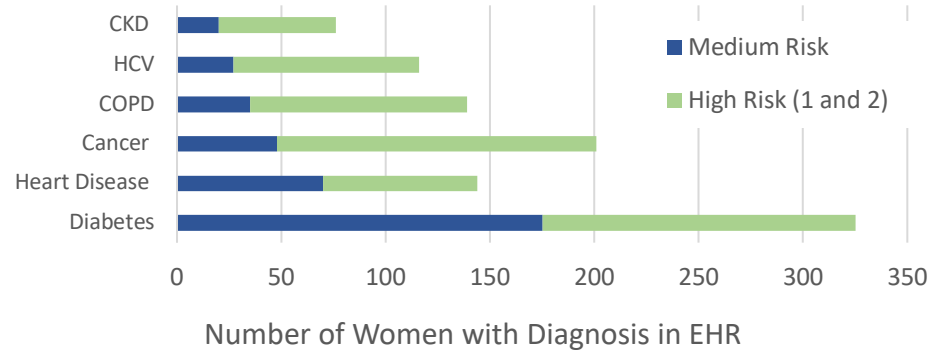
In the next section, we will recommend re-constituting that risk classification system to better inform clinical care decisions and patient placements. In view of that recommendation, we also include a brief discussion of the medium risk women’s population here.



⁴ Hypertension is disproportionately prevalent in correctional populations and is generally asymptomatic; including it in our measure of multimorbidity would create the false impression that nearly all patients are managing multiple chronic illnesses.

The medium risk classification group is the largest in the women’s system and 35% larger than the low risk group. While the preponderance of medical complexity is found among the approximately 800 women with a high risk classification, there is a sub-population of patients among the 2,538 medium risk women that warrants

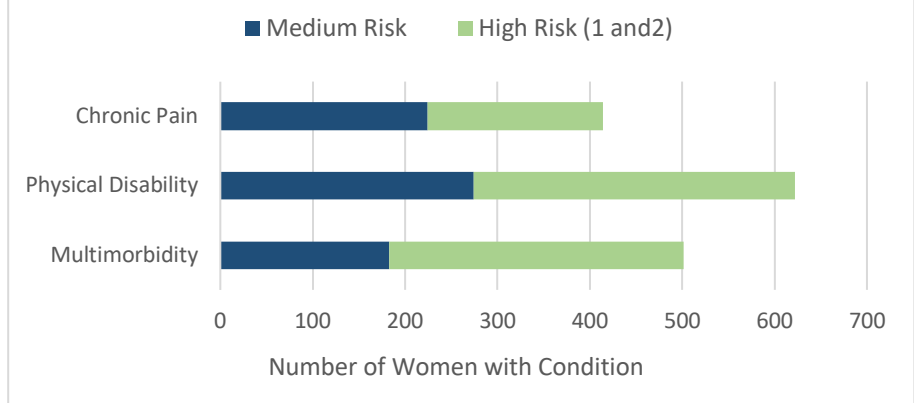
Substantial Numbers of *Medium Risk* Women Have Serious Illness



additional scrutiny in the context of managing the medical bed resource. While the *percentage* of medium risk women with risk factors for medical bed need is low, the raw numbers of such women are substantial and, in some cases, even exceed those found among high risk women (see Figure at top of next page). For example, at least 20 medium risk women have each of the illnesses included in the figure at left (using CCHCS EHR data).

Substantial numbers of medium risk women also experience physical disability (as defined in the CCHCS electronic health record), multimorbidity, and/or chronic pain. In fact, more medium risk women than high risk women are diagnosed with chronic pain. This may be particularly notable because chronic pain is associated with high rates of emergency department use, hospitalization, and 30-day re-hospitalization, patterns that are often more pronounced in women compared to men with chronic pain.⁵ Similarly, nearly as many medium risk women as high risk women (80%) are classified with a physical disability and/or have been assigned a cane, walker, or wheelchair (see Figure at right). Because physical disability may leave a patient unable to live in the general population, this suggests an area where medium risk women may have an elevated risk of being assigned to a medical bed.

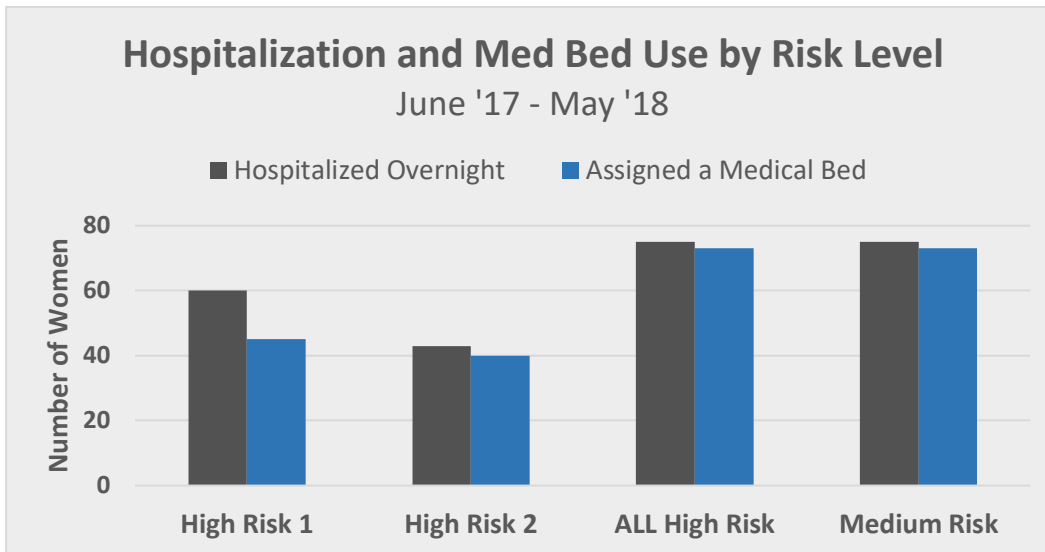
Medium Risk Women Also Experience Pain, Disability, and Multimorbidity



The relevance of medium risk women to optimizing the medical bed resource is made evident by medical bed utilization data. Medium risk women occupy very few licensed nursing care beds on any given day and medium

risk women who are assigned to a medical bed experience, on average, shorter stays. However, over a one-year period from June 2017 through May 2018, nearly as many medium risk women as high risk women were assigned to a medical bed. A similar pattern was observed in overnight hospitalizations (see Figure, top of next page).

⁵ Supported by a number of studies. One recent one: Romanelli RJ, Shah SN, Ikeda L, et al. Patient characteristics and health care utilization of a chronic pain population within an integrated health care system. *The American Journal of Managed Care*, 2017.

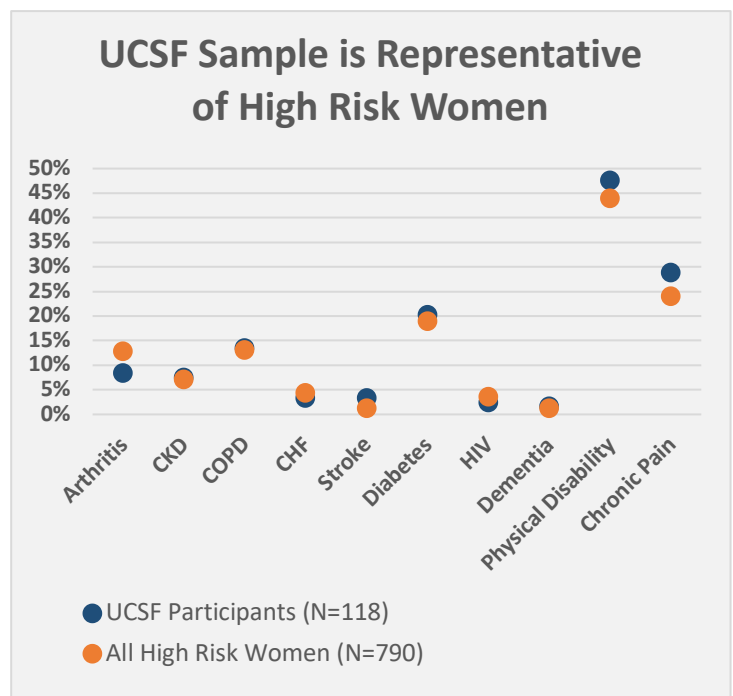


These data underscore findings described in later sections of this report that point to the critical need for new, intermediate levels of care – beds designed to meet health care needs and/or ensure patient safety in ways not possible in the general population. Providing such levels of care for medium and high risk women who have significant medical need and are at elevated risk of hospitalization for any number of reasons (e.g. fall risk, risk of victimization, medication management challenges) is likely to reduce strain on high intensity nursing care beds (CTC and SNF) and help ensure that outpatient housing beds (OHU) are used as intended. Accordingly, **our first set of recommendations address three interrelated areas: levels of care, medical classification, and institutional classification.** Additional recommendations are provided to optimize the identification, placement, and management of patients in need of levels of care beyond general population.

A Note on Patient Data Included in this Report

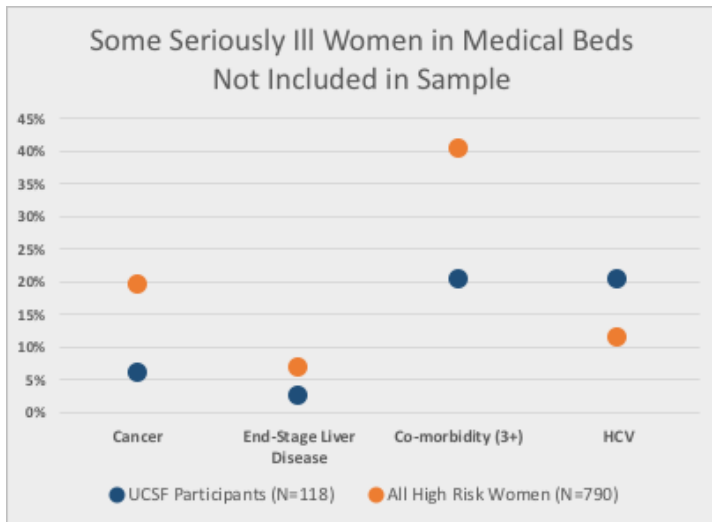
All patient data cited in support of or related to the following recommendations was generated by conducting patient interviews and medical chart reviews with a sample of 118 high risk women (except where noted). Activities to develop the “UCSF Sample” took place from November 2017 to February 2018; patient recruitment and housing at the time of participation in the assessment were based on a census conducted in November 2017.

More women were enrolled at CCWF to reflect the difference in population size between the two facilities. No interviews were conducted at Folsom’s Women’s Facility (FWF) because women requiring medical bed care or who could be reasonably considered at high risk of requiring medical bed care are not generally housed there.



The UCSF sample was developed to represent the overall population of nearly 800 high risk women. (See Figure above, right for a selection of important health measures demonstrating the sample’s representativeness.) We enrolled women in general population, outpatient housing unit (OHU, CIW), correctional treatment center

(CTC, CIW), and the skilled nursing facility (SNF, CCWF). We oversampled patients in the CTC and SNF to ensure that we would be able to draw conclusions about the medical bed patients. Overall, we achieved a representative sample in general population units and as complete a sample as could be obtained in medical bed units (patients were not enrolled if they declined an interview).



Comparing CCHCS administrative data and the data we collected, it is apparent that the UCSF sample is well-calibrated to accurately represent the population of high risk women, although several differences between our sample and the overall population suggest that our medical bed sample under-estimates the prevalence of some serious illnesses in those units. That is particularly true of illnesses, like cancer and end-stage liver disease, with low prevalence so that missing a small number of cases (due to patient participation refusal) can affect representativeness (see Figure at left for relevant measures). This difference is to be expected, as participation was voluntary and patients in a medical bed who declined

to be interviewed were disproportionately likely to do so for health-related reasons (e.g. debilitating shortness of breath, emotionally unable because of serious illness, dementia). (We offered every woman in a medical bed the opportunity to participate with 3 exceptions where patients’ advanced illness precluded participation.) This discrepancy does not affect our ability assess mismatches between patient needs and levels of care or to identify opportunities to optimize medical bed use. Rather, it confirms that some medical beds are appropriately assigned to women with serious and/or debilitating illness. Thus, the under-representation of serious illness in the UCSF medical bed sample does not materially affect our findings or recommendations. We attribute the overrepresentation of patients with HCV in our sample to chance.

We used the representative UCSF sample to collect health and aging-related data that are not often available in the electronic health record and to understand patient perspectives on their health and health care. In addition to these patient-level data, the recommendations issued here draw on an in-depth policy review, landscape analyses, and interviews with key medical leadership, care providers, and other stakeholders.

PRIMARY RECOMMENDATIONS

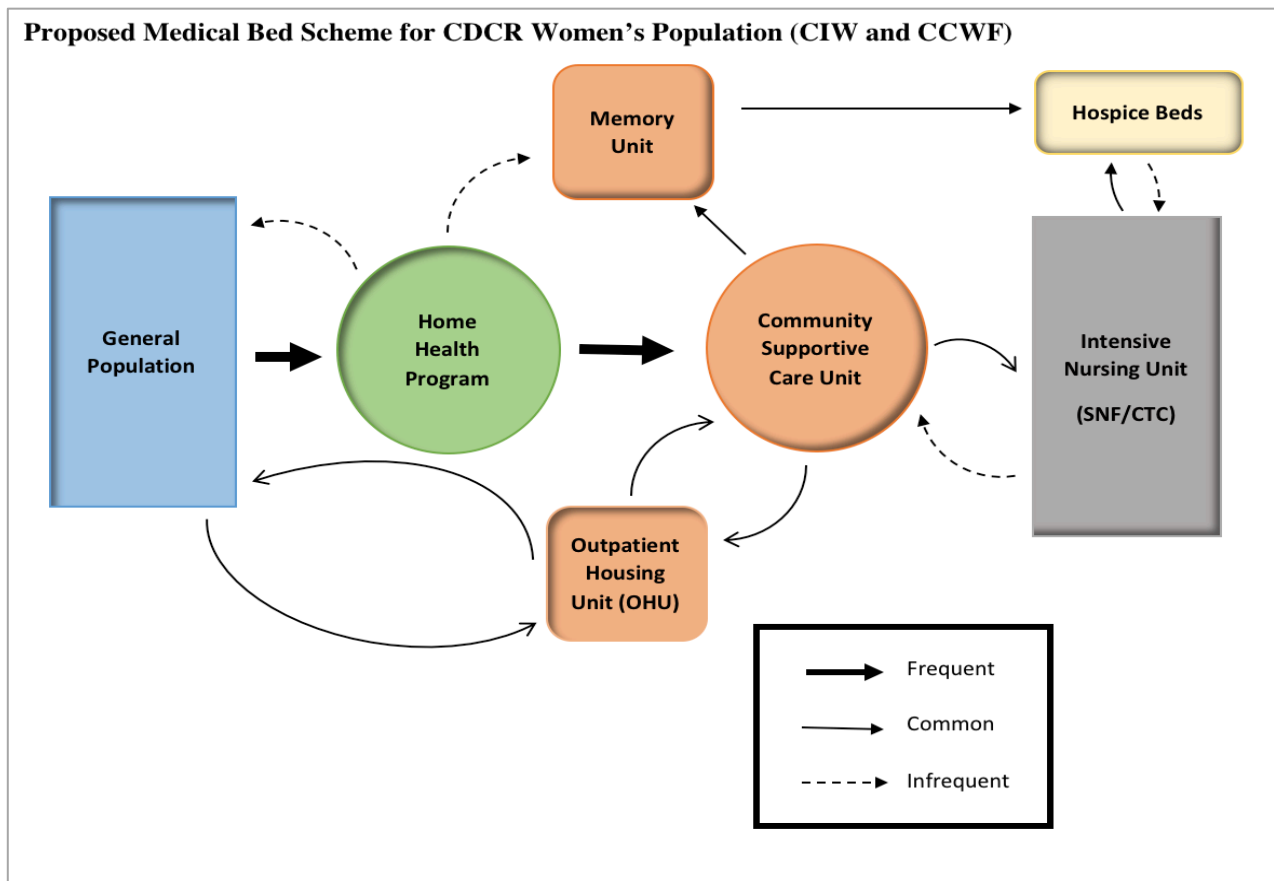
Recommendation 1. Develop New, Cost-Effective Levels of Care

This project's primary finding is that the current medical bed mix does not accurately reflect the diverse healthcare needs of the women's population. As a consequence, we observed three common inefficiencies:

- some women assigned to high intensity nursing care beds cannot live in the general population but would be better cared for at a lower (intermediate) level of care;
- some women living in general population units do not require the intensive medical and nursing care services of the OHU or SNF/CTC placement but require a higher level of - or greater access to - care;
- use of OHU beds as overflow for higher level of care beds with downstream consequences for women in the general population who would benefit from an OHU stay.

These inefficiencies were apparent from patient data analyses and confirmed in interviews with patients and clinicians. We observed multiple factors underlying these trends. The most critical factor, as noted above, is an insufficient supply of medical beds at lower levels of care than SNF and CTC. Another factor is reluctance among some patients to report care needs or seek care because they wish to avoid transfer to a nursing care environment and / or transferred to another institution. A third factor is the under-reporting (in the EHR) of geriatric conditions and related risk factors that, in the community, are commonly used to assess care needs.

To address these inefficiencies, and in view of these underlying factors, we propose that each women's institution implement four new levels of care: **Home Health Program** (minimal infrastructure requirement); **Community Supportive Care**; **Memory Care**; and **Hospice**.



We believe these levels of care can be accomplished with minimal alterations to existing physical infrastructure by re-designating 1 or 2 existing general population housing units at each institution to include 1-2 Community Supportive Care wings and 1 Memory Care wing. These housing units would also run the Home Health Program. Some additional health care staffing would be required, primarily in certified nursing assistance and nursing. We also recommend that at least one dedicated mid-level provider and one dedicated case manager, both with training in geriatric care, be placed in the new units. Some of the proposed staffing capacity is likely achievable through changes to the existing workforce. We now briefly discuss each proposed level of care.

Home Health Program and Community Supportive Care⁶

The rationales for a Home Health Program level of care and Community Supportive Care unit(s) are overlapping. Together, these units are designed to accomplish two goals in optimizing the medical bed resource:

1. The case management-based Home Health Program will improve detection of women in general population who are at risk of adverse health outcomes and increase access to care for at-risk women who can live independently in the general population. Secondary goals are to increase patient engagement by enhancing patient-provider trust and provide workforce development opportunities for clinical staff interested in an outreach services model of care delivery.
2. Community Supportive Care Units based on the Adult Day Health Center model will provide an alternative placement for women identified as high risk who cannot live safely in general population and are not expected to see near- to medium-term health improvements sufficient to return to a general population bed. The number of women who meet these criteria is already high (see charts and figures in this section) and will increase as population aging trends continue.

We recommend that the Home Health Program share staff and operate out of Community Supportive Care units to improve detection, patient assessment, and continuity of care at a critical time – around the loss of independence - in a patient’s health trajectory. These proposed levels of care will help optimize medical bed utilization through four primary mechanisms:

1. Women with stable, well-managed chronic illness(es) who are functionally and/or mildly cognitively impaired will not be placed at a higher level of care than they require; more high intensity nursing beds will be available for patients with serious illness and/or profound disabilities.

The Case Management-Based Home Health model

centers on nurse case managers who create and implement care plans, routinely assess patient health and well-being using standardized assessment tools, and advocate for their patients. Standard patient contact occurs in the context of a “home visit.” The home visit should be adapted in the correctional context to ensure patient privacy but should take place in patients’ housing units in order to achieve a patient outreach presence in housing units. This model is commonly used with patients with complex co-occurring health and social risk factors, including the mentally ill and frail older adults with low socioeconomic status. It has been shown to improve critical clinical outcomes including medication management, functional independence, depression, and patient-rated quality of life. Most significantly, this model reduces risks of nursing home placement, hospitalization, and emergency room use in community settings.

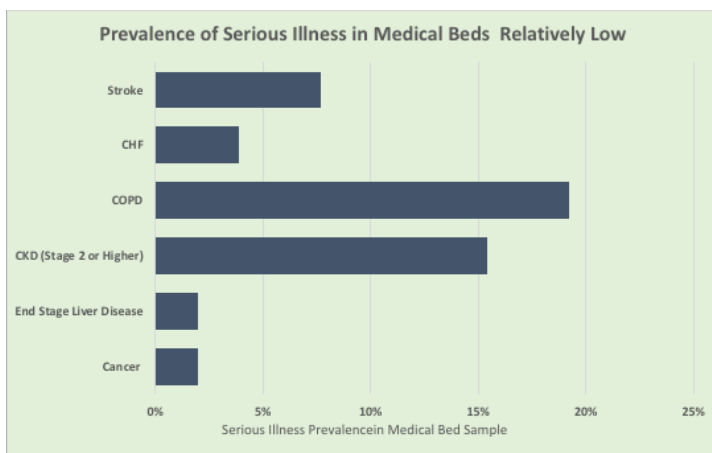
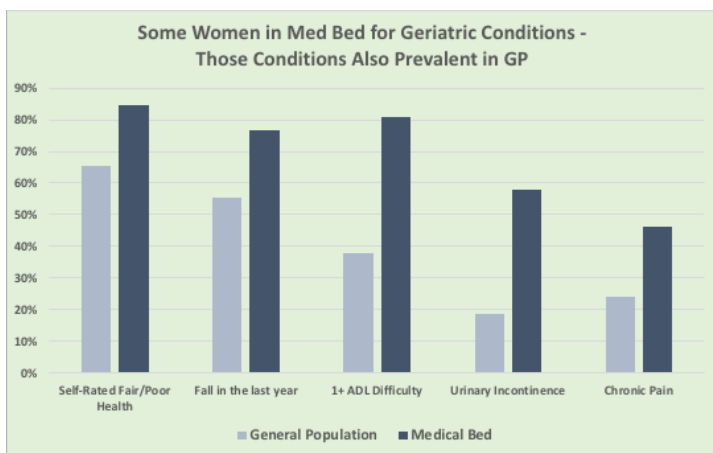
Community Supportive Care using the Adult Day Health Center model

combines unskilled personal care for help with some activities of daily living with socialization and access to physical therapy and basic nursing / medical care. Effective Community Supportive Care includes an environmental assessment and modifications designed to reduce risk and enhance independence. In the prison context, this likely requires a dedicated unit.

⁶ In the literature, the proposed “Community Supportive Care” is often termed “custodial care.”

- OHU beds will not service women with medium- to long-term care needs; all OHU beds will be available for women who are expected to return to health and independent living in the short to medium-term.
- Detection of women living in the general population who are vulnerable to adverse health events and/or deteriorations in health will increase since there will be a more suitable housing option for them. Enhanced access to care for these women will reduce avoidable hospitalizations and OHU placements and allow many more aging and/or chronically ill women to live independently in the general population for longer.
- Over time, improved patient-provider trust leading to greater engagement in care will further enhance detection and broaden the reach of important preventive care.

This recommended approach is supported by evidence showing that some high intensity nursing care beds are being used for women who would be more appropriately placed at a lower level of care. For example, the

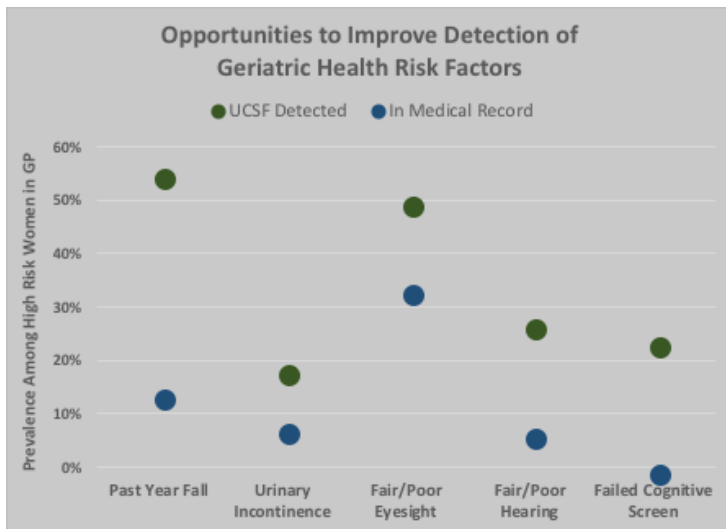


cohort of women we interviewed who were assigned to a medical bed appropriately differed significantly from those in the general population by a number of important geriatric conditions and related risk factors. But they also evidenced relatively low rates of serious illness. (See Figures above.)

Some low disease burden in this group likely owes to our medical bed sample necessarily missing some of these units' seriously ill patients (discussed in the Background to this report, page 8). However, these findings also show that a proportion of the medical bed resource is being used for patients whose aging-related health

challenges would not require 24-hour skilled nursing care in the community but *would* likely require a Community Supportive Care environment. At the same time, these geriatric conditions and related risk factors are also highly prevalent in the general population (see Figure above, left). This finding suggests that some women in the general population would benefit – and likely experience a more stable health trajectory – from greater access to care and/or placement in a level of care designed to address functional impairment and/or managing comorbidities.

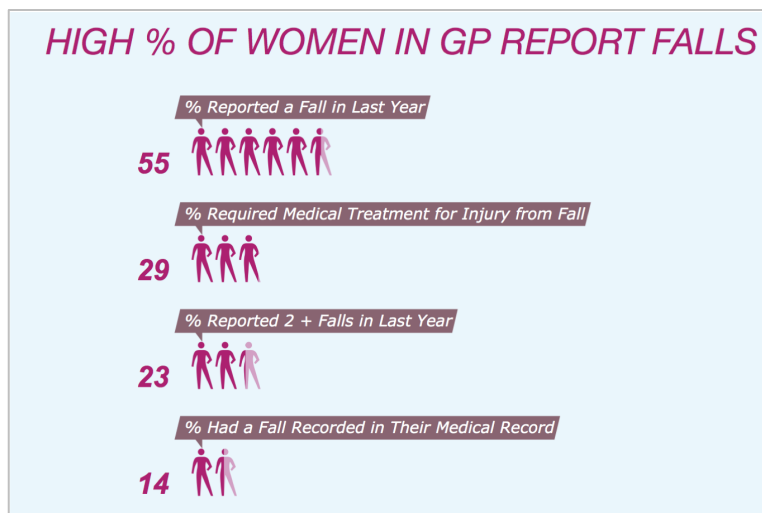
Finally, we also observed evidence that detection of geriatric health risk factors in the general population could be improved (see Figure to right), which is a primary focus of the proposed Home Health Program.



The example of patient falls illustrates the opportunity to achieve better outcomes through greater detection and expanded level of care options. More than half (55%) of the women in our general population sample reported an accidental fall in prison within the past year; half of those – 1 in 4 high risk women living in general population – reported a fall with an injury requiring medical care. A fall in that time span was recorded in only 15% of the sample’s medical records.

Falls are the leading cause of fatal injury and of trauma-related hospital admissions among older adults⁷ and frequently result in serious injuries, like hip fracture, that contribute significantly to morbidity and mortality and for which treatment and rehabilitation are challenging and costly. Moreover, two major risk factors for future falls are environmental hazards and a prior fall.⁸ Thus, housing women at risk of a fall in general population will, over time, lead to medical bed

assignments (OHU and CTC/SNF) that could possibly be avoided if those patients were identified and, depending on their assessed risk, enrolled in a Home Health Program to monitor and mitigate fall risk or housed in a Community Supportive Care unit designed to significantly decrease that risk.



Building 505 at CCWF

Over the course of multiple visits to CCWF, our team sketched out a proposal for institutional staff to formally categorize Building 505 as a Community Supportive Care unit. Building 505 is presently an informal “OHU-light” with half-day RN/LVN presence, a call-light system, a small number of ADA beds, and a dedicated CO staff. Many patients with Community Supportive Care needs seek to live there by leveraging seniority through the regular housing assignment system. In our conversations with patients and staff alike, 505 was universally recognized as a successful experiment. Patients said that with the security of a 505 bed, they were more willing to engage in care because they no longer feared being placed in a nursing care unit. Since our visits, CCWF staff have proposed re-purposing 505 as discussed during our visits. We endorse that effort and specifically recommend that Building 505 be developed to include 2 Community Supportive Care wings, one Memory Care wing, and central offices for the Home Health Program.

The falls example also points to the value provided by a Home Health Program. Regular assessment and timely detection are critical components of effective care for aging and/or chronically ill populations. A Home Health Program would help providers identify women living in the general population who are at risk for an increase in level of care, leading to improved patient engagement and ratings of care.⁹ This last point is important in view of our findings that some patients are reluctant to seek care. It is possible that falls are under-recorded in the medical record because patients who reported a fall to our UCSF team did not report it to their health care provider. Two central purposes of home-based care models are to remove barriers to care and to optimize patient-provider relationships. Achieving these goals will improve health outcomes and, along the way, improve the quality of clinical data available for ongoing learning and quality improvement.

⁷ <https://www.ncoa.org/news/resources-for-reporters/get-the-facts/falls-prevention-facts/>

⁸ https://www.cdc.gov/steady/pdf/risk_factors_for_falls-a.pdf

⁹ For more on this model of care, including a review of the evidence, see “A systematic review of different models of home and community care services for older persons” (<https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-11-93>)

Memory Unit

Alzheimer’s disease and other dementias (“AD/D”) are a growing concern in correctional facilities. AD/D, if unrecognized in the correctional setting can, theoretically, expose patients to increased risk of victimization and/or injury and recurring and/or escalating behavioral infractions and associated disciplinary measures. It can also contribute to poor engagement in care and/or treatment compliance, leading to deteriorating health associated with poorly managed chronic conditions.¹⁰ These and other risks are likely associated, though to a lesser degree, with Mild Cognitive Impairment (MCI) – often a precursor to AD/D - in prison as well.

There is no cure for MCI or AD/D though early detection and treatment can extend periods of good function and delay need for 24-hour nursing care. In CDCR, California Health Care Facility plans to begin piloting a Memory Care unit for men based, in part, on a model first developed in New York State prisons. No such pilot is currently planned for women in CDCR. Yet we found considerable evidence that a Memory Care program is needed at each women’s institution (CIW and CCWF). More than 85% of our sample completed the Montreal Cognitive Assessment (MoCA). Scores below 25 are considered abnormal and referred for additional diagnostic assessment. Over 90% of patients with a MoCA score *below 20* will experience short-term conversion to Alzheimers or related dementias.¹¹ (See text box for important context when interpreting the CDCR women’s MoCA data.)

A Note on Cognitive Screening Results

The Montreal Cognitive Assessment (“MoCA”) is not a diagnostic test. It is a screen that identifies patients who are in need of more historical data and cognitive testing. We have used a lower cutoff score (24/25) that is typically used when screening medically vulnerable populations. We have also added a point to the scores of anyone with less than 12 years of education, as is standard when scoring the MoCA.

The MoCA is a widely used screen, comparable to the MMSE. However, the test was first developed in a sample of predominantly white, middle class Canadians. Evidence suggests potential testing bias against populations with low literacy and/or some racial/ethnic minority groups. There are alternatives but nothing demonstrably better for use in prisons.

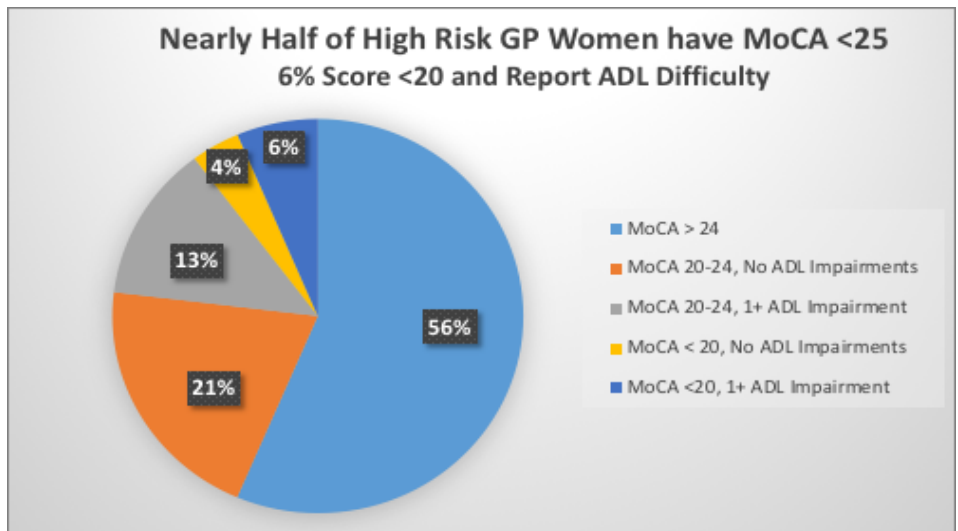
Given the very high prevalence of abnormal cognitive screening found in the MoCA scores we reported, these limitations do not affect our conclusion that a memory unit at each women’s facility is needed. However, it is also likely that substantially fewer than 90% of women scoring below 20 on the MoCA in our interviews will convert to AD/D.

Nearly 1 in 5 participants in our sample registered an education-adjusted score below 20, including 6 (33%) of the participants who took the MoCA while in a medical bed. Functional impairment, or dependence in one or more activity of daily living (eating, dressing, bathing, toileting, moving from bed to a chair) is a component of the diagnostic criteria for dementia. All 6 patients in the medical beds also reported difficulty with at least one activity of daily living. These 6 medical bed patients likely under-represent the prevalence of poor cognitive health in medical bed units; we did not interview some patients because they had an existing diagnosis of dementia and could not consent to participate. Of note, CCHCS data provided to us indicates that 5 CCWF SNF beds were occupied by patients with dementia on May 1, 2018, one of whom required 24 hour 1:1 care. This suggests that AD/D and/or MCI (a frequent pre-cursor to dementia) may be under-appreciated even in medical beds.

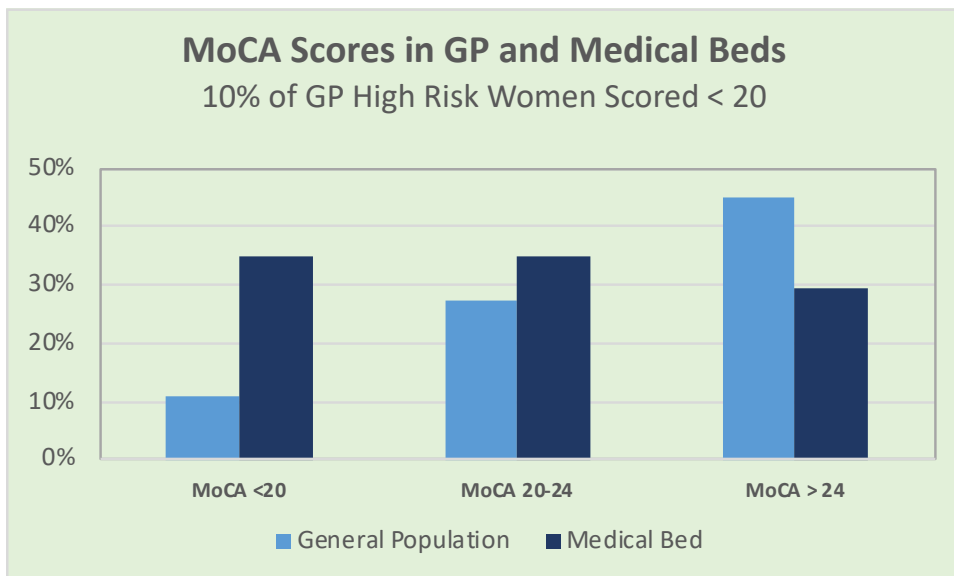
¹⁰ For an example of this literature, see: Ibrahim, Joseph Elias et al. “Chronic Disease Self-Management Support for Persons with Dementia, in a Clinical Setting.” *Journal of Multidisciplinary Healthcare* 10 (2017): 49–58. *PMC*. Web. 29 June 2018.

¹¹ Julayanont P , Brousseau M , Chertkow H , Phillips N , Nasreddine ZS (2014) Montreal Cognitive Assessment Memory Index Score (MoCA-MIS) as a predictor of conversion from mild cognitive impairment to Alzheimer’s disease. *J Am Geriatr Soc* 62, 679–684.

In the *general population*, 10% of our participants scored < 20 on the MoCA. More than half of these also reported difficulty with one or more activity of daily living (see Figure, right). This does not mean that these patients have dementia but suggests that a proportion of high risk women living in the general population are experiencing some degree of cognitive impairment alongside difficulty with routine daily activities, warranting further evaluation. These women warrant additional cognitive assessment and likely would benefit from placement in some enhanced level of care (Home Health Program, Community Supportive Care, or Memory Care).



Data from CCHCS show 11 women (0.21%) system-wide have a diagnosis of MCI or AD/D. Of note, the most common measure reported in the EHR in regards to cognitive health that our team observed was the Test of Adult Basic Education (TABE). The TABE, to our knowledge, is not a validated health tool or, if it is, is not one typically used for assessing aging-related cognitive impairment. We recommend instead using the MoCA (non-proprietary) or MMSE (proprietary) as a cognitive screen.



We draw three critical conclusions from these data:

1. High intensity nursing care beds are being used to care for some patients with cognitive impairment or early dementia who cannot live in general population but do not require such a high level of care. (It is important to note that SNF beds are necessary for some patients with severe dementia, as in cases when 24 hour 1:1 care is needed.)

2. It is very likely that some

women in the general population would benefit from a higher level of care because of cognitive impairment that limits their ability to live independently and safely in the general population.

3. Greater efforts to detect and assess cognitive vulnerability in the general population may be warranted. Based on our analyses, 5-10% of the high risk general population (40-80 patients) likely need additional assessment.

In principle, these conclusions were nearly unanimously endorsed by care providers we spoke with at each women’s institution, where we heard consistent awareness of (and concern over) a growing challenge with management of MCI and AD/D. We asked almost everyone we spoke with approximately how many patients, if any, they thought would be assigned to a memory unit if one were opened at their institutions. No one estimated fewer than 8 (ranges were 8 to 30).

Memory Care units can be integrated into existing housing units by modifying a designated wing(s). Infrastructural changes can likely be minimal,

though creating a calm, safe environment for such patients is critical. Staffing modifications are more significant but appropriate training is not likely to be overly burdensome and the unit would represent an attractive professional and personal development opportunity for the right clinical and correctional staff.

A proposed *Hospice level of care*, building on the current use of designated Hospice beds in the SNF and CTC, is discussed in Recommendation 4 below.

Memory Care and the “Memory Unit”

Memory Care provides patients with a safe, supervised environment with access to specifically trained staff and activities that potentially slow the progression of the disease (e.g. music therapy, arts and crafts).

Memory units are secure, to prevent wandering, and calm, soothing, and predictable environments. Stress reduction is a focus in such units and care is taken not to allow security concerns to deprive patients of important access to socialization and the outdoors. Frequent safety checks, and additional safety precautions like locking up poisonous cleaners, are common.

Estimating Need for the Proposed Levels of Care

While it is beyond the scope of this report to issue specific medical bed need projections based on patient data, we can provide rough estimates of the likely current need for beds at the proposed levels of care based on our representative sample of high risk women and our review of aggregate CCHCS data describing prevalence rates of select health indicators in the medium and low risk populations. We issue these estimates with the caution that the data used here were collected primarily in the last months of 2017 and are likely to underestimate future need given rapidly changing demographics in the prison population systemwide. (Hospice beds are excluded from these estimates because hospice eligibility criteria are well-established and the relatively small number of eligible patients is likely to fluctuate substantially by random chance.)

Based on our findings, we see sufficient evidence to suggest a Memory Unit with a minimum of 25 beds (50 total) is likely needed at each women’s institution (CIW and CCWF). There appear to be 3 current patient populations motivating this need:

- First, 3 women housed in medical beds with a known diagnosis of dementia were not included in our sample. Four additional women we interviewed in medical beds scored lower than 20 on the MoCA screening test and reported difficulty in 3 routine activities of daily living (bathing, dressing, eating, toileting, and/or getting in and out of bed). A <20 score on the MoCA is associated with elevated risk of converting to Alzheimer’s Dementia (if the patient has not already). Not all of these women required 24-hour nursing care for non-dementia medical illness, suggesting at least some of these women would be more optimally housed in a Memory Unit.
- Second, 15 high risk women from the general population participating in our 20% sample registered an abnormal score on the MoCA *and* reported difficulty with one or more activity of daily living, including 5 who scored below 20 on the MoCA. Based on the representativeness of our sample, *and relying on*

just these 5 women with scores below 20, we estimate that a minimum of 25 women in the general population would likely benefit from placement in a more supportive, memory care environment. However, these findings also suggest that at least 50 others would likely be appropriate for more in-depth cognitive assessment and consideration for placement in a Memory Care of Community Supportive Care bed pending those results.

- Finally, according to CCHCS administrative data, 1 medium risk woman is diagnosed with dementia. Based on this, and our findings that a large proportion of women do not always seek care or medical assessment when needed, we believe that there may be some small number of women who are classified as medium risk but would benefit from placement in a more supportive, memory care environment.

Based on these figures, we estimate that a Memory Unit bed represents the optimal housing for roughly 3-5 women currently in a medical bed, 25-40 high risk women currently in the general population, and 3-5 medium risk women currently in the general population. To account for this population, and anticipating a growth in the need for Memory Unit beds in the coming months and years, we recommend a minimum of 50 Memory Unit beds, divided approximately evenly between the two women's facilities.

Based on our findings, we see sufficient evidence to suggest 1-2 Community Supportive Care Unit(s) comprising a minimum of 150 beds (300 total) is likely needed at each women's institution (CIW and CCWF).

The goal of Community Supportive Care Units is to provide safe, social, and health-promoting housing for women whose placement in the general population imposes avoidable risk for adverse health outcomes and/or disengagement from care (e.g. falls, depression, medication mismanagement). This dovetails with the goal of the proposed Home Health Program, which allows women to continue living in the general population by providing additional outreach support to mitigate these same potential adverse outcomes. Therefore, it is difficult to provide precise estimates for the numbers of women who would be more appropriate for one of these options (rather than the other). However, a number of health indicators collected for this project enable us to offer the following estimates:

- 64% of high risk women in our representative sample rated their health poor or fair, a widely used and well-validated measure of overall health, suggesting that approximately 500 high risk women living in general population are in poor or fair health.
- More than 35% of the high risk women living in general population we spoke with reported difficulty with one or more activities of daily living (bathing, dressing, eating, toileting, and/or getting in and out of bed), suggesting that approximately 250 high risk women in general population are at considerable risk for falls and/or in need of extra medical care and targeted programming opportunities. This is consistent with our finding that more than 40% of these women reported 2 or more accidental falls in the past year. (Moreover, CCHCS data shows that 44% of high risk women are classified as having a physical disability and/or are assigned an assistive device.)
- According to CCHCS data, over 300 high risk women in the general population are managing 3 or more chronic health conditions. Some of these women may be able to administer effective self-care and maintain treatment compliance without additional support. Yet many would likely benefit – and achieve more stable health and lower risk of health decline – from Home Health Program support. And some – particularly those of advanced age and/or with co-occurring functional or cognitive impairments – will be most optimally housed in a Community Supportive Care environment.
- According to CCHCS data, 113 medium risk women are classified as having a physical disability; 183 are managing 3 or more chronic illnesses; and 224 report chronic pain. There is likely considerable

overlap among these patient groups. However, these data suggest that a substantial number of medium risk women would benefit from Community Supportive Care Unit housing and many more from Home Health Program enrollment.

Based on these and other data (for example, related to the prevalence of depression, measures of poor social engagement, and low health literacy), we conservatively estimate that at least 1/3 (or 250) of the high risk women and at least 50 medium risk women currently living in the general population would be more optimally housed in a Community Supportive Care Unit. We further estimate that roughly twice those numbers (most of the remaining high risk women and approximately 100 medium risk women) would benefit from placement in a Home Health Program.

Recommendation 2. Assign CIW and CCWF to the same institutional medical group and provide the full continuum of care at each institution

This recommendation aims to optimize the medical bed resource at each institution and empower clinical teams to provide a complete continuum of care at their home institution. A goal of this recommendation is to greatly reduce medically-motivated patient transfers between institutions. This recommendation is supported by our analysis of patient data, our collection and assessment of patient perspectives, and our conversations with institutional medical leadership and clinical staff.

Currently, CCWF is defined by policy as a “*Basic Institution*” while CIW is defined as an “*Intermediate Institution*” (see Table below).

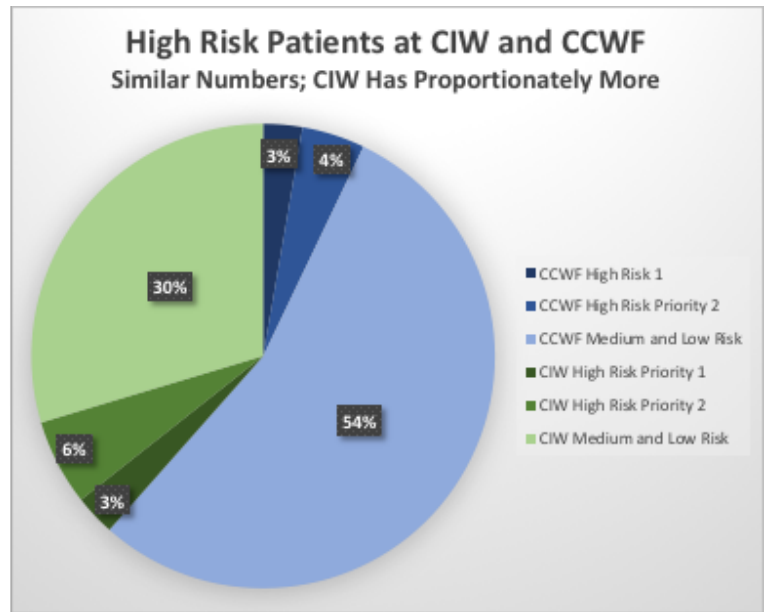
Table. Institutional medical groups

Basic Institutions: These facilities provide nursing and primary care provider services on a continuous basis and can provide urgent care on-site. Short and long term placements into OHU or CTC are available on-site. Basic consultations (general surgery, orthopedics, obstetrics, radiology, ophthalmology, internal medicine) are available.	Level Of Care:	OP, OHU, or CTC
	Proximity To Consultation:	Frequent Basic Consultation (Or Less)
	Medical Risk:	Medium Risk (Or Less)
	Nursing Care Acuity:	Medium Intensity Nursing (Or Less). <i>Example: Calipatria State Prison</i>
Intermediate Institutions: These facilities provide nursing and primary care provider services on a continuous basis and can provide urgent care on-site. Short and long term placements into OHU and CTC are available on-site. Basic Consultations (general surgery, orthopedics, obstetrics, radiology, ophthalmology, internal medicine) and Tertiary Care Consultations (oncology, endocrinology, neurology, neurosurgery, interventional cardiology, nephrology, cardio-thoracic surgery) are close and readily available. Specialized Services, such as HIV Clinical Category 1, pregnancy services, therapeutic diets, and hemodialysis may be provided.	Level Of Care:	OP, OHU, or CTC
	Proximity To Consultation:	Tertiary Consultation (Or Less)
	Medical Risk:	High Risk (Or Less)
	Nursing Care Acuity:	High Intensity or Specialized Nursing (Or Less). <i>Example: Mule Creek State Prison</i>

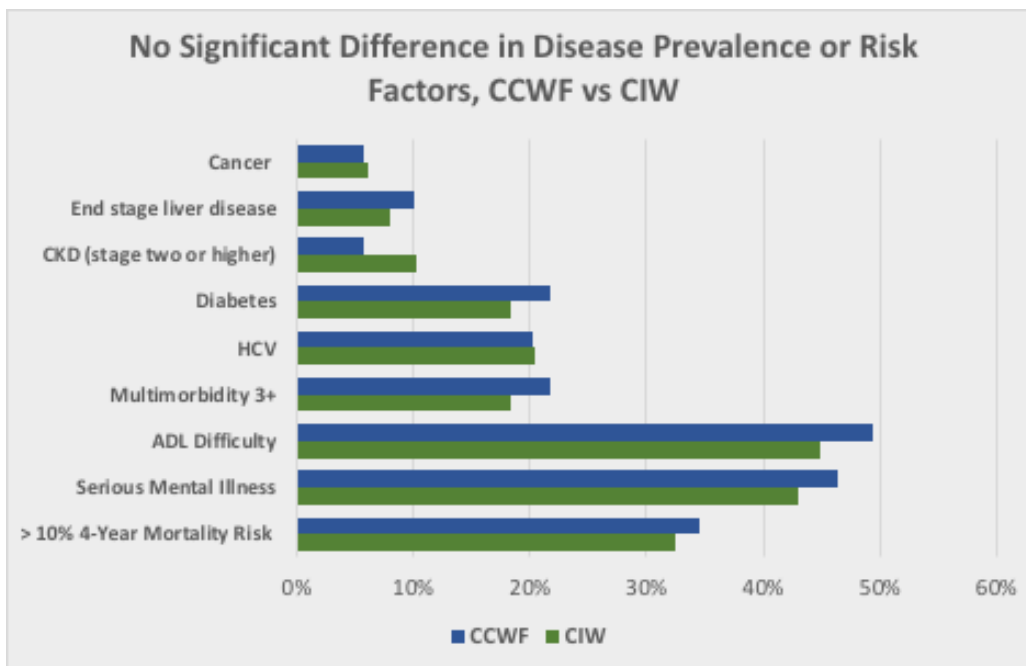
It is our understanding that the distinction is based primarily on access to tertiary care, which is more readily available at CIW. We also understand that, related to this difference in medical grouping, CCWF and CIW divide some health care “missions.” For example, CCWF is intended to house women requiring housing in accordance with Americans with Disabilities Act (ADA) standards while CIW houses women with a serious illness diagnosis that requires an “intermediate” facility. (In addition, CIW care for all women who are in the later stages of pregnancy and / or post-partum.)

However, in practice, both CIW and CCWF have tertiary consultation *options* within 35 miles (for CCWF, in Fresno and Merced). In reality, the institutions are called upon to deliver a comparable level of care to comparably medically complex patient groups (see Figures, this page). For example:

- Both CIW and CCWF have 24-hr nursing care beds; in fact, CCWF (the “Basic” Institution) has more high-intensity nursing beds than CIW in number and per patient.
- Each facility houses comparable numbers of high risk patients (1 and 2). (CIW has fewer medium and low risk patients as CCWF and thus *proportionally* more high risk patients.)



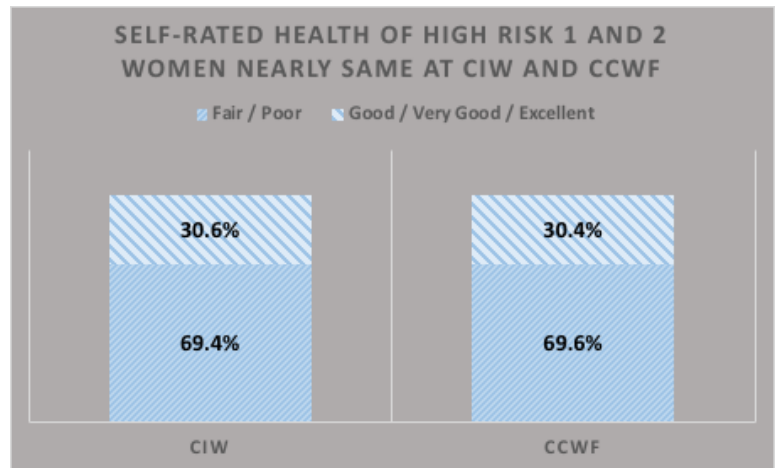
Of the medical diagnoses and risk factors we examined, none differed significantly in prevalence between 49 women at CIW and 69 at CCWF. Serious illnesses that may require regular or frequent tertiary care visits like cancer and chronic kidney disease (stage 2 or higher) were equally prevalent at CIW and CCWF. Similarly, patients at CIW were just as likely as those at CCWF to report difficulty with one or more activity of daily living (“ADL” [eating, dressing, toileting, bathing, transferring from a lying to a standing position]) or an



accidental fall during incarceration within the past year. We also ran every participant in our sample through a commonly used evidence-based prognostic calculator, the “Lee Index”¹² that assigns patients a percent likelihood of death within 4 years. We found that roughly equal proportions of high risk women (1 and 2) at each facility had a >10% likelihood of death within 4 years.

¹² The Lee index is based on data from nearly 12,000 patients living at home with an average age of 67 years old in the nationally representative Health and Retirement Study. When used with a population of patients age 50 or older living in the community, it is correct 82% of the time. Because the home-dwelling population of U.S. adult differs considerably from the CDCR population, it is more useful in the current context to compare between CDCR populations (as here, comparing CIW with CCWF) rather than to draw precise conclusions about the overall CDCR women’s population. More information on the Lee Index, and on how prognostic models work in general, can be found here: <http://eprognosis.ucsf.edu/lee.php>.

In addition, we found that the self-rated health profile of patients at these two institutions is nearly identical (see Figure at right). Self-rated health is considered the best patient-reported measure of overall health and near-term health decline, is a commonly used measure, and has been shown to be a valid predictor of health care use (e.g. physician visits) and mortality.¹³



Given this even distribution of women by medical need between the two facilities, the women’s prisons could (a) provide a complete continuum of care at both institutions, or (b) differentiate health services between the two institutions and move patients around accordingly. Based on the evidence, and the strong opinions of both patients and providers, we recommend that CIW and CCWF be placed in the same medical grouping and both provide an equivalent continuum of care for patients across the spectrum of chronic and serious illness.

This recommendation is consistent with input we gathered from clinical leadership, staff, and patients. Staff at CCWF, in particular, expressed concern that their status as a basic institution unduly limits their resources and, in some cases, denies them agency in clinical decision-making. Leadership and staff at CIW were satisfied with their designation as an intermediate institution but expressed similar frustration over being compelled to transfer patients to CCWF. We also observed frustration over the use of medical beds in the CTC at CIW, which some leadership and staff felt were over-utilized for mental health crisis cases – resulting in patient transfers that could have been avoided.

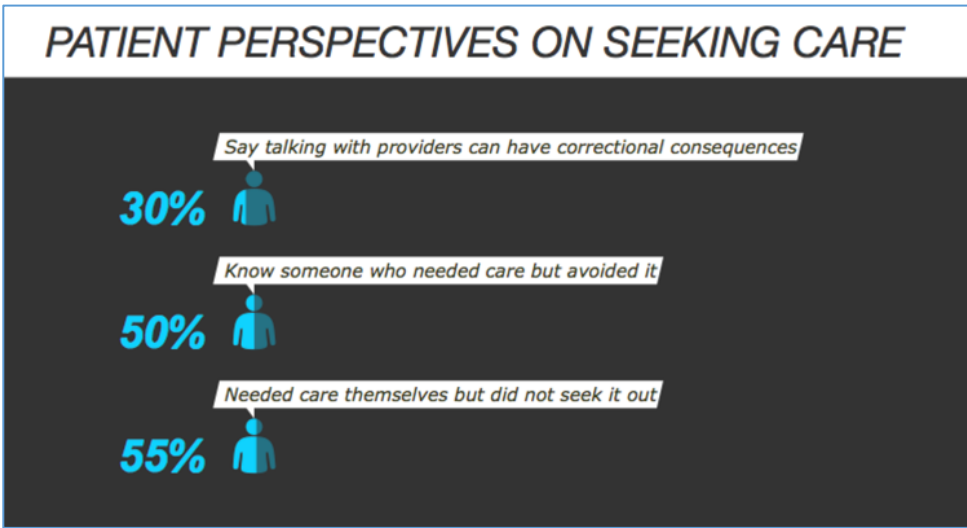
Overall, we found that women are transferred in a variety of circumstances related to their health care (see Table) based on the institutions’ different medical groupings. We conclude that too frequent and sometimes poorly justified patient transfers between CIW and CCWF has unintended adverse consequences.

Table. Common reasons for health-related transfers between institutions
a) Imbalance in medical bed acuity resources between the two facilities: some women may be transferred in order to access a higher level of care and/or to ‘step down’ to a lower level of care or general population bed.
b) Policy requires housing at an “intermediate facility”: triggered when a need for closer and more readily available access to tertiary consultation services arises or a higher level of care is needed.
c) Heightened ADA needs: though CIW is working to open 30 Americans with Disabilities Act (ADA) beds, some patients are transferred from CIW to CCWF when they are issued durable medical equipment in order to access ADA-compliant housing in compliance with ongoing litigation.

Among staff, such transfers appear to (a) undermine leaders’ and providers’ sense of autonomy in patient care, and (b) diminish, in some cases, their ability to foster and maintain good relationships with patients. Clinicians

¹³ A number of studies have shown this. An example of one widely cited such study is: Miilunpalo S, Vuori I, et al. Self-rated health status as a health measure: The predictive value of self-reported health status on the use of physician services and on mortality in the working age population. Journal of Clinical Epidemiology, 1997,50(5):517-528. [https://www.jclinepi.com/article/S0895-4356\(97\)00045-0/abstract](https://www.jclinepi.com/article/S0895-4356(97)00045-0/abstract).

also cited unnecessary paperwork and lost time spent getting up to speed on new, complex cases, sometimes leading to interruptions in care and further straining patient-provider relationships. Such factors are critical in job satisfaction, patient engagement and, likely, staff retention. Some providers also expressed concern that the system of differentiated “health care missions” does not always correspond to optimal allocations of resources, training, or personnel. For example, while CCWF has been given the mission of housing a disproportionate number of disabled women, providers there said they did not receive the training or personnel needed to fulfill that mission. A number of staff remarked that it is not uncommon for two transport vans to pass each other on Interstate 5, one carrying an ADA-qualified patient from CIW to CCWF, the other a patient with some specified tertiary care need traveling from CCWF to CIW.



Among patients, splitting health care missions between institutions – and the practice of transferring women based on medical need – was a consistent concern. This is important for two reasons. First, many of the women we spoke to said that transfers, particularly in the context of worsening disability and / or serious illness, exacted an emotional toll on both patients and their peer support networks. The practice, they said, often felt

punitive and undermined their trust in healthcare providers and in their willingness to be honest about their medical needs. A number of women we spoke with cited specific cases in which they had served decades of time with a person but were unable to support them in their last years or months of life because they were transferred and had no recourse (that they knew of) to appeal. Women also expressed frustration that patients’ family support networks outside of prison were not considered when making health-related transfers, which in some cases had the adverse outcome of limiting patients’ psychosocial support at the exact moment when that support was most needed. If transfers are having the effects that women report they are having, this has relevant health consequences because increases in loneliness and depression – and the absence of social support – in the context of disability and chronic and/or serious illness have been shown to worsen outcomes and accelerate health decline.

The second reason to consider adjusting policy in view of these patient complaints is that many women said they - or someone they knew - needed health care but did not seek it out of fear of being transferred. We asked this question in multiple ways and in multiple contexts (interviews and focus groups) but the responses took on a consistent pattern: some women hide worsening health or refuse care because they worry that having their health status discovered by providers will result in either transfer or placement in restrictive high intensity nursing care units. This pattern was borne out in our patient health data. Data we collected on geriatric conditions and common health risk factors associated with health care utilization revealed, on average, higher rates of these conditions than were recorded in medical records (see Figure at bottom of page 11). This is important because early detection and active management of problems like urinary incontinence, falls, sensory impairment, and cognitive complaints can reduce future health care need and slow the progression of disease. (While not as common, we also learned these concerns can result in other forms of overutilization of healthcare

services as some women at CCWF who feared transfer to CIW reported seeking a classification as requiring an assistive device and/or disability believing it would keep them from being transferred.) If the system of differentiating health care missions has the unintended consequence of disincentivizing medically vulnerable women from seeking care in the way that they describe, or in incentivizing others to request devices they do not need, this can have important negative consequences for future health care utilization and medical bed need.

In a system like the network of CDCR’s 25+ men’s institutions, specialization among facilities and/or the creation of one facility like CHCF is likely preferable from cost and quality of care perspectives. However, in the women’s systems, where two facilities are responsible for nearly all women and patient movement around the system is far less common, there are fewer efficiencies to be had in specialization. Based on our findings, what efficiencies are created by differentiating health care missions are likely reversed by this policy’s unintended consequences, including staff dissatisfaction, damaged patient-provider relationships, worse clinically relevant psychosocial outcomes among patients, and delayed detection of disease and disability. The one exception to this is the case of pregnancy care, for which specialization and potential transfer is likely appropriate since it has a limited timeline, nearly all women return to full health following pregnancy and, given the number of pregnancies, staffing both institutions to manage pregnancy is inefficient.

In view of these practical realities and observed concerns, we recommend that both CIW and CCWF provide a full continuum of care with each of the levels of care recommend above (page 12).

Recommendation 2a. Address infrastructure barriers to the continuum of care at CIW

In order to provide a continuum of care that optimally matches clinical and housing resources to medical needs, each institution should have skilled nursing beds (including ~2 hospice beds as needed), a memory unit, one or more Community Supportive Care units, outpatient housing beds for acute care and recovery (can be integrated into Community Supportive Care units), and a Home Health Program. We believe that this mix can be accomplished at both CIW and CCWF with relatively minimal infrastructure investment and targeted increases in staff levels (and types). However, two infrastructure barriers at CIW should be addressed as soon as possible as necessary pre-requisites to achieving the proposed levels of care. These are:

1. Complete the “path of travel” construction required to house women with disabilities. While addressing path of travel concerns expeditiously is needed to avoid unnecessary patient transfers (and limit patients “gaming” this system by either hiding disabilities at CIW or seeking assistive devices to protect against transfer at CCWF), it is also a patient safety concern that effects non-disabled residents,

Concerns with differentiating services between institutions according to...	
Providers:	Patients:
- disrupts patient care	- transfers feel cruel, cause pain
- undermines patient trust	- undermines trust in providers
- undercuts needed resources / personnel	- disincentives seeking care
- causes frustration among staff	- can make access to family harder

including the 55% of high risk (1 and 2) women in our sample who reported a fall in the past year.

2. Provide alternative mental health crisis capacity and reserve CTC medical beds to address medical need. While the addition of Community Supportive Care and Memory Care beds will relieve strain on nursing care level medical beds, our findings also suggest that nursing care level bed use will increase over time as patient demographics continue to change. Those we spoke with at CIW suggested that CTC beds were often used for mental health crisis and observation. We view this use of high-resource medical beds as inefficient, with downstream consequences when nursing care level beds are operating over capacity.

Recommendation 2b. Develop an in-patient short-term substance use disorder treatment program at Folsom's Women's Facility (FWF) to relieve pressure on the medical bed resource

Over the course of our interviews with leadership and clinical staff, it was evident that mental health crisis exerts a pressure on medical beds that can lead to sub-optimal use, potentially preventing some women in need of a medical bed from accessing it. While addressing the broader challenges associated with mental health crisis is beyond the scope of this project, we observed one area where optimizing services around a medical need might reduce the need for acute mental health crisis beds and relieve some of the associated pressure placed on the medical bed resource: substance use disorders and associated behaviors.

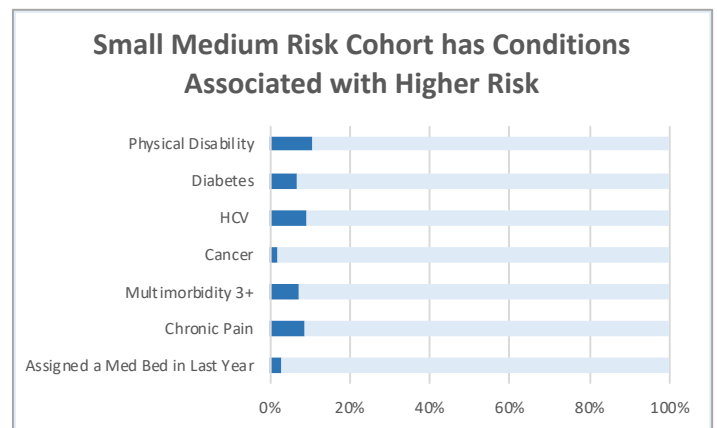
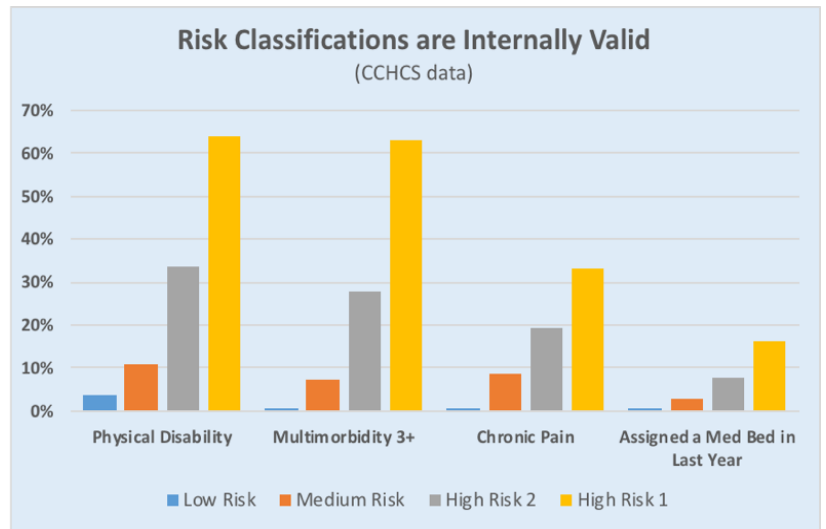
Both staff and patients described incidents in which patients sought a mental health crisis bed placement for a reason related to a substance use disorder. Examples included: patients with legitimate mental health crisis brought on by substance use, patients who want to detox and / or enter substance use treatment and feel that mental health crisis provides the surest access point, and patients using mental health crisis (and bed placement) to escape drug debts. We recommend partnering with subject area experts in Elk Grove to assess the extent to which a dedicated (non-punitive) unit at Folsom's Women's Facility (FWF) for acute, non-punitive, in-patient substance use treatment could reduce mental health crisis placement at CIW and CCWF for cases where substance use is the primary behavioral health risk factor. This assessment should also include an estimate of such a program's ability to reduce pressure on the medical bed resource (particularly "swing beds") connected to overflowing mental health crisis beds. This recommendation further supports our prior recommendation to eliminate the "swing bed" designation in CIW's CTC.

Recommendation 3. Revise medical risk classifications for better use in clinical care and patient placement

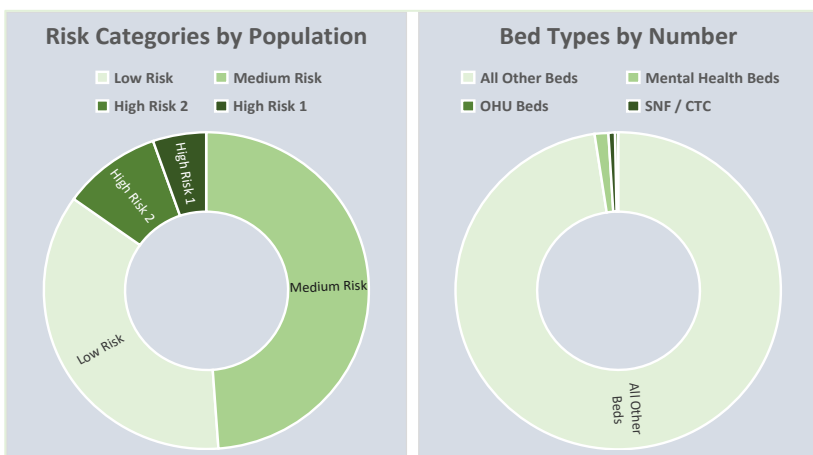
Clinical Risk Assessment constitutes the medical classification factor by which all patients are assigned a risk level (high priority 1, high priority 2, medium, low). Risk levels are based on current medical conditions and past year utilization patterns (see Appendix 1). Patient placements are made by institutional medical staff matching patient needs to available medical program (i.e. bed) capacity as detailed in the Medical Classification Matrix (MCM). The MCM is a regularly updated listing of capacity and census across all CDCR facilities and is maintained by CCHCS' centralized Health Care Placement Oversight Program (HCPOP). Medical bed placements are reviewed and endorsed by HCPOP, which may also refer patients on a case-by-case basis to a classification committee for additional consideration. Disagreements are resolved by the Regional Deputy Medical Executive, in concert with HCPOP.

Based on the available evidence, we reach the following conclusions regarding risk classification:

1. Current risk categories are internally valid (see Figure at right). On average, high risk priority 1 patients exhibit greater medical acuity than priority 2 patients; high risk patients are more vulnerable than medium risk patients; and we see no evidence that low risk patients are systemically misclassified.
2. However, the high risk classifications are too broad to be relevant for clinical care or patient placement. For example, we found little to no evidence that a greater number of high intensity nursing care beds are needed yet there are nearly 300 patients assigned to the highest medical risk classification. Similarly, nearly 500 patients are classified high risk priority 2 yet in the current medical bed scheme, it is not clear how this classification should bear on patient placement.
3. Moreover, while risk assessment is by nature imperfect and some misclassification will always occur, it is not clear what the medium risk classification is meant to define or accomplish. The population of medium risk patients, including nearly 50% of all women, includes a majority who could likely be classified as low risk and a small sub-population of women (see Figure at right) whose risk factors and utilization patterns suggest they would be more accurately categorized as high risk.



4. The current risk classification scheme does not adequately value measures of independence. For example, disability, functional impairment, cognitive impairment, chronic pain, and other factors known to limit patients' independence are not determinative classification factors.



5. Overall, there is an imbalance between how patients are distributed across risk classifications and the distribution of "risk-matched" medical beds such that the two are not meaningfully connected (Figure at left). Concern about this mismatch was expressed by clinical leadership and staff, who reported little use of the risk classifications in care or patient placement decisions and expressed frustration that risk classification requires resources but returns little benefit to providers.

We propose optimizing the classification system for use in clinical care and patient placement by, first, expanding the levels of care as described in Recommendation 1 above and, second, revising the classification system to directly correspond to the newly developed levels of care. Anticipated benefits include:

1. Improving patient engagement in care by eliminating concerns about transfer or placement in high intensity nursing care for the great majority of patients who require a higher level of care than general population but are at no reasonable near-term risk of nursing care placement;
2. Reducing some unintended but likely adverse consequences of a broadly defined and geographically dispersed high risk population such as victimization, injurious falls, and declines in functional and cognitive health related to a lack of early detection and management; and
3. Facilitating positive patient-provider relationships by attending to patient concerns in 1 and 2 and giving clinicians more level of care options, allowing a more collaborative, patient-centered approach to care.

To achieve these goals, we recommend 4 *guidelines* for revising the risk classification scheme with suggested corresponding risk levels (see Table).

Table. Four guidelines for optimizing risk classification with corresponding suggested risk levels

1. Incorporate important measures of independence into risk classification and allow for dependence in activities of daily living or similar limitations to determine risk classification when appropriate.

2. Assign patients with a low risk of acute or long-term care utilization according to the access to care that would best meet their health care needs, for example:

“*Low Risk - Low Need*”: patients with no know health conditions or recent health complaints

“*Low Risk – Self-Managed*”: patients with self-managed and stable chronic illness(es) who are able to live independently, have demonstrated self-care competency, and are not cognitively impaired

3. Differentiate patients who have a specialty care need, require regular care support, or cannot live independently in a general population bed but do not require nursing or Memory Care, for example:

“*Medium Risk - Recovery*”: patients with a current or recent specialty or acute care need who are expected to return to Low Risk status in the short term

“*Medium Risk – Care Management Support*”: patients who are medically stable but require additional care management support (via routine outpatient visits, Home Health Program, or Community Supportive Care) and are not expected to return to Low Risk

“*Medium Risk – Complex Care*”: patients with complex care needs and/or unstable health trajectories that do not yet require 24-hour nursing level care but warrant additional monitoring and support

4. Differentiate patients who require nursing care according to their anticipated future care needs:

“*High Risk – Recovery*”: patients who require nursing care (SNF / CTC or Community Supportive Care) who are reasonably expected to return to a medium risk classification in the short term

“*High Risk – Long-Term Care*”: patients who are expected to require long-term care in a SNF or CTC bed

“*High Risk – Memory Care (1 and 2)*”: patients who require long-term placement in a Memory Care bed but do not require 1:1 supervision (Memory Care 2) and those that do (Memory Care 1)

“*Hospice*”

Implementing such guidelines would incorporate a meaningful snapshot of current and anticipated health care need in each classification and produce a risk matrix that is clinically relevant. Classifications would also correspond to medical bed resources, requiring providers to consider risk and patient need in tandem when making placement recommendations and providing leadership with readily available data to better anticipate future population-level needs (for example, by analyzing population trends across classifications over time).

3a. Improve screening and classification at reception

Based on interviews with clinical leadership and staff, we recommend additional resources and guidance for reception screening to ensure that patients are matched to appropriate levels of care upon entry into the CDCR. Specifically, we recommend that reception screening for women over age 50 or with a documented history of physical disability and/ or functional or cognitive impairment receive a geriatric assessment and be classified according to the results of that assessment (in addition to consideration of active diagnoses and patient complaints). CDCR should discontinue the policy of granting durable medical equipment (DME) upon entry to any patient with a record of DME during a prior incarceration and replace it with providing a *current* evaluation. We further recommend that any patient assigned a risk level greater than Low Risk Low Need receive a brief patient education session within 72 hours of arrival with the goals of (a) documenting a self-care plan and (b) establishing the patient-provider relationship (including clearly distinguishing healthcare from correctional staff and identifying patient advocates). By investing in recalibrating reception screening and providing patient education, this recommendation aims to optimize the medical bed resource by promoting engagement in preventive and proactive care.

3b. Introduce routine geriatric assessment for appropriate patients and include functional and cognitive measures in the medical problem list

We recommend that clinical care teams implement routine assessments commonly used to identify impairments and risk factors that are common in aging populations and often associated with increased health care utilization and need. Such assessments include:

1. Introducing standardized geriatric assessment in annual visits for patients age 50 or older
2. Performing gait assessments as needed
3. Instituting regular fall screening
4. Cognitive screening for patients age 50 or older or who present or are referred with memory or related complaints or new patterns of behavioral infractions

In addition, we recommend adding ADL impairment, cognitive status, urinary incontinence, falls to the medical problem list and establishing a “falls precaution” protocol for patients who report an accidental fall, including a temporary change in risk classification. As the women’s population continues to age, routine use of geriatric-focused screenings such as these will reduce the rate of adverse outcomes like falls and will slow downward trajectories in health associated with poorly managed geriatric conditions.

3c. Change policy so that numbers of providers are not determined by risk profile

According to clinical leadership, each institution’s personnel budget and/or allocation is determined by the risk profile of its patient population. We recommend re-calculating appropriate staffing levels using the risk classification guidelines recommended above and allowing institutional medical and nursing leadership staffing exemptions for additional personnel when a compelling case can be made that additional staff are needed to provide effective care management to all medium and high risk patients.

Recommendation 4. Enhance Advance Care Planning, Palliative Care, and Hospice Services

Hospice care is supportive care focused on comfort and quality of life for patients who have chosen to forego curative treatment in the final months of life. Hospice eligibility typically requires a six-month prognosis. However, because prognostication is an inexact science, hospice and palliative care providers are trained to err on the side of ensuring that patients have access to hospice care in the later stages of serious illness. As a result, it is expected that some patients will be in hospice for longer than six months. In addition, some patients improve while in hospice or change their mind about their values and health care wishes. Patients may choose to revoke their hospice status and return to curative care at any time and are always permitted to reapply for hospice again if they still meet the medical eligibility requirements.

Palliative care is specialized medical care for *all* people with serious, life-limiting illness focused on quality of life and relief from the stress and symptoms commonly associated with serious illness. Increasingly, palliative care is the community standard of care for all patients with serious, life-limiting illness well before the end of life and is often offered to patients at any stage of serious illness *alongside* curative treatment. The goal of palliative care is to ensure that patients experience the best possible quality of life while receiving care that is consistent with their values and the outcomes that are most important to them (including curative care).

Advance care planning (ACP) – the process by which patients’ goals of care and health care wishes are elicited and recorded – is a cornerstone of patient-centered hospice and palliative care practice. One component of ACP is the completion of an advance directive (AD), which outlines a patient’s care wishes and may designate a surrogate decision-maker. One component of advance directives is a Physicians Orders for Life-Sustaining Treatment (POLST) Form, which translates patient wishes into concrete medical orders (e.g., *do not resuscitate* orders). ACP is highly valued, in part, because it provides a process for patients to develop and articulate their values and wishes, often with implications beyond what is described in an AD or POLST. It is also important because many patients with serious illness lose the ability to participate in important health care decisions at the end of their life. In such cases, advance care plans provide surrogate decision-makers, family members, and/or providers with clear guidance about what is important to them. ACP can be conducted by any provider with appropriate training and knowledge and can occur across multiple visits and/or with multiple providers.¹⁴

Numerous studies have shown that access to quality hospice and palliative care ultimately reduces procedure burden, resource utilization, and associated costs,^{15,16} including in populations with behavioral health risks similar to prisoners, for example patients with end-stage liver disease.¹⁷ Overall, hospice and palliative care have been shown to improve patient outcomes like pain and depression, reduce emergency department visits, and reduce costs of care at the end of life.^{18,19}

¹⁴ For a primer on ACP and ADs, see: <https://www.uptodate.com/contents/advance-care-planning-and-advance-directives>

¹⁵ Foreman T, Kekewich M, Landry J, Curran D. Impact of palliative care consultations on resource utilization in the final 48 to 72 hours of life at an acute care hospital in Ontario, Canada. *J Palliat Care*. 2015;31:69–75.

¹⁶ Daniel P. Triplett, Wendi G. LeBrett, Alex K. Bryant, et al. Effect of Palliative Care on Aggressiveness of End-of-Life Care Among Patients With Advanced Cancer. *Journal of Oncology Practice* 2017 13:9, e760-e769

¹⁷ Arpan A. Patel, Anne M. Walling, Joni Ricks-Oddie, Folasade P. May, Sammy Saab, Neil Wenger. Palliative Care and Health Care Utilization for Patients With End-Stage Liver Disease at the End of Life. *Clinical Gastroenterology and Hepatology*, Volume 15, Issue 10, October 2017, Pages 1612-1619.e4

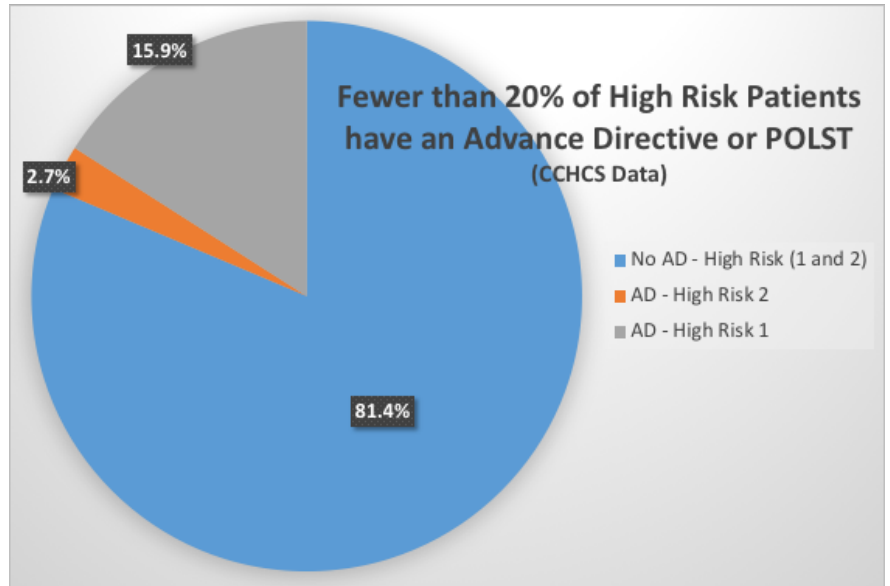
¹⁸ Meier DE. Increased Access to Palliative Care and Hospice Services: Opportunities to Improve Value in Health Care. *The Milbank Quarterly*. 2011;89(3):343–380. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3214714/>

¹⁹ May P, Normand C, Cassel JB, et al. Economics of Palliative Care for Hospitalized Adults With Serious Illness: A Meta-analysis. *JAMA Intern Med*. 2018;178(6):820–829.

Based on our review of patient data and interviews with stakeholders, medical leadership, clinical staff, and patients, we conclude that the women’s health program has an important opportunity to optimize hospice and palliative care services. This conclusion is supported by four primary findings:

1. **Medical record data collected by our team and provided by CCHCS suggest that many more patients could benefit from advance care planning (ACP).**

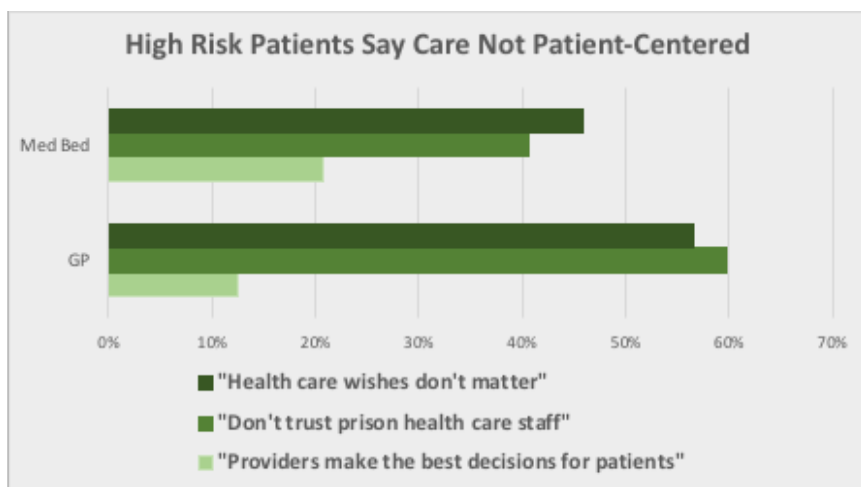
ACP is the cornerstone of hospice and palliative care services because it elicits and documents the patient values and wishes that such services rely on for effectiveness. An AD or POLST is not itself evidence of evidence-based advance care planning delivery. But evidence of ADs and POLSTs in the medical record



offer the best available measure of ACP in the women’s system. According to electronic medical record data provided by CCHCS, fewer than 1 in 5 high risk women (1 and 2) have an AD or POLST on file (see Figure above), including fewer than half (46%) High Risk Priority 1 patients. This was consistent with findings from the UCSF sample, where only 57% of women *in a medical bed* had an AD or POLST on file and 17% of all participants (high risk 1 or 2) reported a conversation about advance care planning with their doctor at the institution. (ACP was defined for women prior to answering these questions.)

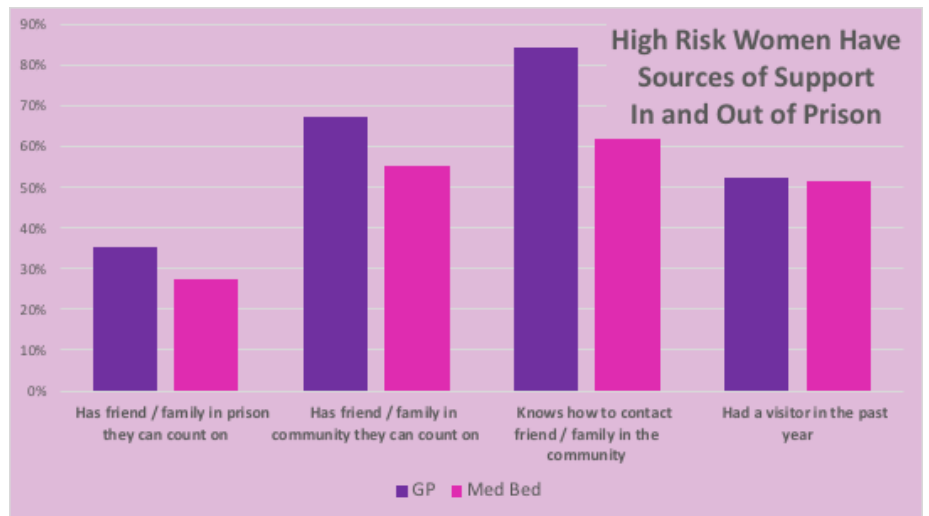
2. **Nearly all women in the UCSF sample said they cared about their healthcare, yet 1 in 5 felt hopeless about their health.** Women also expressed a general lack of trust in the prison health care system along multiple measures, including on the question of whether providers could be trusted to make the best decisions for the patient. **More than half believed that their health care wishes do not**

matter in guiding their care. These trends were observed in the general population and in the medical beds, suggesting an opportunity to optimize patient-centered care for high risk patients. Evidence-based ACP, palliative care, and hospice care are the community standard of patient-centered care in the context of complex and serious illness and have been shown to improve the doctor patient relationship and increase patient and family satisfaction with care.²⁰



²⁰ Detering, Karen M., et al. "The impact of advance care planning on end of life care in elderly patients: randomised controlled trial." *Bmj* 340 (2010): c1345.

3. **Leadership, staff, and patients report that the women’s institution needs a formal hospice program and that current policies, procedures, and work-arounds are insufficient.** Specifically, medical leadership and clinical staff requested additional training in palliative care and more reliably available bed space. Patients said that some patients were resistant to hospice because of deficits in patient-provider trust and communication. Additionally, women who participated in the Comfort Care Program²¹ expressed the opinion that policies governing patient access to support networks were overly restrictive, leading to poor outcomes for patients and caregivers alike. These sentiments were supported by our review of the 14 patients who died of illness from April



2016 through March 2018. Given the relatively small sample of deaths that occurred over these 2 years, our findings should be considered anecdotal and not necessarily reflective of trends in care. However, the death review provides case examples that illustrate ways in which enhanced ACP, hospice, and palliative care services could optimize medical bed care, including ensuring patients have the opportunity to elect hospice and / or palliative care at important junctures (see Box, bottom left.)

Based on results of a small sample death review, optimizing advance care planning, hospice care, and palliative care could...

- ...ensure medical orders (AD / POLST) are followed*
- ...transition more patients from curative to hospice care earlier in their illness trajectories*
- ...reduce “send-outs” for hospitalization in the last months and days of life*
- ...improve patient-provider communication and trust, particularly in medical bed units*
- ...decrease provider burnout and caregiver burden*
- ...improve symptom management and related patient outcomes, including depression, anxiety, and distress*

4. **Many women who are medically eligible for compassionate release and/or medical parole do not apply, in some cases leading to deaths in custody – and associated medical bed use – that might have been able to occur in the community.** This finding is based on our death review as well as on interviews with medical leadership, clinical staff, and patients (see Figure, next page). Leadership and staff expressed confusion regarding compassionate release and medical parole (and very few people we interviewed *knew about* the state’s elderly parole policy). In the context of compassionate release, uncertainty around

prognostication was a common theme, suggesting that clinician training and enhanced systems of ongoing support in this area could increase appropriate applications for medically-based early release.

²¹ A program in partnership with Hind’s Hospice that trains resident volunteers to provide comfort care to seriously ill and dying patients, including holding 24-hr vigil in the final days of life.

Overall, enhancing knowledge about ACP, hospice and palliative care among patients and providers could optimize the management of serious illness for high risk women and ensure that patients receive care in accordance with their wishes, including earlier transitions to hospice for eligible patients who elect hospice care and greater use of available compassionate release policies.

Consistent with evidence from the community, we expect that high quality palliative care and hospice programs would, over time, reduce health care utilization, improve patient experiences of care and related outcomes (pain,

depression, anxiety), and lower the cost of care, on average, for patients who die in custody.



Doing so is particularly critical because, absent changes to law or early release policies, the number of deaths among people in custody in California are expected to rise in the coming years. As noted in the background to this report (see Figure at top of page 4), a recent report by the Public Policy Institute of California found that 25% of California prisoners are serving life sentences²² at the same time that more than 20% of women prisoners in the state are age 50 or older and an additional 17% are in their forties. That expectation is borne out by recent data. From 2008 to 2016, the number of prisoners in California decreased by 32% while the number of deaths in custody decreased by only 9%.²³ For those who do die in custody, offering appropriate hospice care in the least restrictive environment possible, at the facility closest to patients’ support networks (family and friends in and/or out of prison) is also necessary in order to achieve community-standard end of life care.

Our specific recommendations to optimize advance care planning, hospice care, and palliative care include:

1. Provide clinician training.

- All members of the health care team should be trained and confident in communicating with patients who have serious illness to elicit their questions, fears, concerns, values, and health care wishes and in how to record those conversations in the medical chart. Undertaking a clinical training initiative to optimize care in this area will have important secondary benefit of enhancing patient-provider communication and trust throughout the system, which is why this training should be made available to all providers at all levels. VitalTalk²⁴ is an example of a program that provides trainings for all levels of healthcare providers and at multiple levels of instruction.



²² Goss J, Hayes J. California’s Changing Prison Population. Last update: February 2018. Public Policy Institute of California. <http://www.pplic.org/publication/californias-changing-prison-population/>

²³ Based on statistics provided in Bureau of Justice Statistics annual prisoner reports.

²⁴ For more information, see: <http://vitaltalk.org/courses/>.

- b. All MDs, PAs, and NPs should receive training in palliative care-focused symptom management – including how to discuss and manage psychological and spiritual distress - hospice eligibility, and prognostication. The Center to Advance Palliative Care (CAPC) is a nationally recognized leader in clinical training and support in the area of patient-centered palliative and hospice care



and provides countless resources, including an annual training Seminar.²⁵

2. **Implement Palliative Care Telemedicine Consults.** In the California Medical Facility Hospice Program, CDCR has the nation’s oldest and among its highest performing prison hospice programs with exemplary leadership and clinical care. Given their proximity to Elk Grove, and the growing telemedicine program operating out of Elk Grove, we recommend that the women’s health program leverage this internal expertise by coordinating as-needed palliative care, hospice eligibility, and hospice care telemedicine-based consultation for patients with serious life-limiting illnesses. Over time, this service should be extended to include patients at all stages of illness whose pain and symptoms prove difficult to assess and/or manage. We recommend that a secondary goal of this telemedicine program be to build palliative care capacity and clinical leadership in the women’s institutions by recognizing local palliative care clinical champions in the CCWF SNF and CIW CTC.

3. **Designate 2 medical beds at each facility with reduced custody restrictions when occupied for hospice use.** Each facility should have 2 licensed beds that are given priority to hospice patients when needed. (This would formalize current practice.) To achieve this goal, each facility will require a plan for transitioning lower acuity nursing care patients to community supportive or Memory Care units when need of a hospice bed pushes the nursing care unit over capacity, including provisions for additional: (a) health care team staffing in community supportive or Memory Care units to accommodate these “downgraded” patients, and (b) correctional staff in the nursing care unit to facilitate greater access to friends, family, and related support through the duration of a patient’s hospice stay. (Facility leadership may consider collaborating with custody to identify hospice beds that can best facilitate greater access to social support.) Hospice patients admitted to medical beds should be given relative autonomy to accept visitors in their living area, including fellow prisoners and correctional support

A Foundation for Clinical Training

As part of the current project, our UCSF team will provide a one-day foundational clinical training at each of the two women’s facilities caring for aging and medically complex patients. The trainings will provide primers in aging and geriatrics, advance care planning, serious illness and prognostication, and detection of cognitive impairment. Each of the learning modules touches on strategies for effective patient communication. As the women’s health program continues to advance patient-centered care at CIW and CCWF, patient communication and enhanced patient-provider trust leading to greater patient engagement in care should be primary goals. A better informed, health literate, and more trusting and engaged patient population is an important tool in slowing the progression of disability and chronic illness and enabling more women to live independently and safely as long as possible in general population.

²⁵ For more in CAPC, see: <https://www.capc.org/>

staff and non-incarcerated friends and family, and to access daily extended time in outdoor recreation spaces. Based on our conversations with patients, extending compassion to patients in hospice, and opening these beds to less restrictive visiting policies, will have a positive overall effect on patients' views towards the health care staff and attitudes towards engaging with care providers.

- 4. Broaden local comfort care support and enhance peer comfort care program.** Following interviews with leadership, staff, and patient comfort care givers, we conclude that both CIW and CCWF could consider expanding their partnerships with local area hospice providers and further developing institutional leadership in order to optimize hospice support programming. The current Hind's Hospice-partnered Comfort Care program is in flux due to Ms. Hind's retirement and would benefit from enhanced oversight and investment in peer support programs. We recommend that the comfort care program be integrated into an expanded and enhanced Peer Support Program (also discussed in Recommendation 7 below), which is already being developed, in order to ensure that prisoners offering comfort care are adequately trained, resourced, supported and recognized for their work. We also recommend leveraging existing expertise and programming models within CDCR. Specifically, clinical and correctional staff champions at CIW and CCWF should partner with CMF to export appropriate elements of their successful Pastoral Care Service Workers program and with leaders at the California Men's Colony and elsewhere to adapt the Gold Coats peer support program for use in the women's memory units.
- 5. Develop and implement a system of ongoing learning and quality improvement around serious illness and death.** The Mortality Review System (MRS), a mortality review approach developed at the Mayo Clinic and quickly becoming the community standard model, takes as its premise that every patient death offers at least some opportunity for learning and quality improvement.²⁶ By adopting this organizational learning approach to death, Mayo has reduced inpatient mortality rates and developed numerous quality improvement initiatives that have improved outcomes in other critical areas of care, including patient safety. The MRS has also been highly rated by providers, many of whom view it as a professional development and clinical leadership opportunity. The MRS is a multidisciplinary committee review to promote system-wide learning and identify and correct system or "process" errors (not focused on individual clinical errors or clinician accountability). We recommend that the women's facilities adopt a monthly Mortality Review System meeting for learning-based case review (including difficult cases that did not result in death) modeled on the Mayo approach.²⁷

²⁶ Jones J, Huddleston J. Every Inpatient Death Creates an Opportunity to Save Lives: The Mayo Clinic Mortality Review System [abstract]. *Journal of Hospital Medicine*. 2014; 9 (suppl 2). <https://www.shmabstracts.com/abstract/every-inpatient-death-creates-an-opportunity-to-save-lives-the-mayo-clinic-mortality-review-system/>. Accessed June 27, 2018.

²⁷ For more information on the MRS approach, and evidence of its impact on organizational learning and patient safety outcomes, see: Huddleston J, et al. Learning from Every Death. *Journal of Patient Safety*: March 2014 - Volume 10 - Issue 1 - p 6-12. https://journals.lww.com/journalpatientsafety/Fulltext/2014/03000/Learning_From_Every_Death.2.aspx

SECONDARY RECOMMENDATIONS

The following secondary recommendations are designed to supplement and, in many cases, support the recommendations made in the prior section. Some recommendations (e.g. on patient-provider trust) draw elements from prior recommendations together into one place to illustrate how our primary recommendations are interrelated and responsive to two overarching goals: (1) optimizing patient-centered care to enhance patient engagement in health and provide clinicians opportunities to develop professionally and be recognized for their work; and (2) continue to build a strong, evidence-based geriatrics and palliative care practice in view of current and anticipated demographic trends.

Recommendation 5. Implement the “Geriatrics and Palliative Care Consult Team” with Elk Grove Headquarters Medical Leadership

As we discuss at length in this report’s Background Section and under Recommendation 1, the CDCR’s women’s institutions are in the process of a dramatic demographic shift that has made caring for a growing number of aging and increasingly medically complex patient population a central operational challenge. In the medical bed context, optimizing medical bed resources requires strategies and approaches to care that are designed to identify, assess, and manage common geriatric conditions in order to enable medically vulnerable women to live independently and / or with relatively minimal Community Supportive Care support for as long as it is in their best interest to do so – and to provide appropriate patient-centered nursing level or hospice care when needed. We have made recommendations to re-conceptualize levels of care, medical bed resources, risk classification, and related policies to meet this challenge. **In addition, we recommend that each women’s facility develop a leadership team specifically tasked with championing geriatric care and serving as an on-call resource for their colleagues when confronted with a relevant clinical challenge.**

The proposed “*Geriatrics and Palliative Care Consult Team*” is an internal consult service at each facility that comprises multidisciplinary team members who receive specialized annual training in current topics and community standard practice in geriatrics. The teams would ideally include at least one: physician, nurse manager, line nurse, mental health provider, social worker or case manager (and/or clergy), and a correctional officer representative. Members should receive annual continuing education training in geriatrics (for example through funding to attend the Annual Meeting of the American Geriatrics Society) in order to learn, represent this innovative program on a national stage, and develop a network of expert external colleague-level community support. Physicians on the team should be supported to pursue the Certificate of Added Qualifications in Geriatric Medicine.²⁸ Non-physician clinicians should be supported to attend UCLA’s 4-day continuing education “Intensive Course in Geriatric Medicine” or an equivalent curriculum. All team members, including non-clinicians, should be supported to complete continuing education in gerontology, assisted living, hospice, and related fields on an annual or semi-annual basis.

These internal geriatrics resource teams would be able to apply expertise in geriatric assessment and care to complex cases across medical units and throughout the general population of each women’s facility, addressing challenges like dementia-related agitation or wandering, repeated fall risk, new onset geriatric depression or anxiety, urinary incontinence, and many other issues that are likely to arise with increasing frequency and– if poorly responded to – can result in avoidable medical bed utilization and/or health deterioration. If well-

²⁸ <https://www.theabfm.org/caq/geriatric.aspx>

implemented, these Geriatric and Palliative Care Consult Teams would be available to any colleague in the facility facing a relevant challenge and would hold monthly case meetings with attendance open to other clinicians and relevant staff to promote organizational learning and clinical peer mentoring.

If the challenges associated with an aging population discussed here are apparent throughout the system, we also **recommend developing a Geriatrics and Palliative Care leadership position at Elk Grove** to coordinate and support efforts like the Geriatrics Clinical Teams and further promote organizational learning in this area on a system-wide level throughout the CDCR women’s and men’s facilities alike.

Recommendation 6. Enhance provider satisfaction and remove contributors to provider burnout

Over the course of our interviews with medical leadership and clinical staff, we recognized opportunities to enhance the provider experience and potentially prevent burnout in the challenging prison clinical environment. As the proportion of medically complex patients continues to grow, we recommend that particular attention be paid to assessing and addressing provider job satisfaction and burnout before it leads to staff shortages.

Because workforce development was well outside the scope of this project, our primary recommendation in this area is to elicit provider feedback, including anonymously (e.g. survey-based), to identify cost-effective interventions to address provider concerns regarding the clinical practice environment, job satisfaction, and burnout. For example, scheduling, post assignments, rotations, and patient-paneling all came up as potential areas for further inquiry and consideration in our interviews with clinical staff and leadership. Provider engagement to enhance satisfaction (and retention) and prevent burnout should be routine.



“We’re just putting them wherever the beds come open... it’s pretty chaotic.”

In addition, we recommend two concrete actions in this area:



“We are running into new territory every six months – and we’re only going to see more [dying patients].”

1. Increase the emphasis on – and investment in - team-based care. Well-designed and implemented team-based care approaches have been shown to improve clinical decision-making, patient outcomes and satisfaction, and provider satisfaction.²⁹ (Although it should be noted that a transition to team-based care can engender initial resistance.) Multidisciplinary team-based care is also the preferred, most effective model of geriatric care. Some recommendations that clinical team members made in this context included:
 - Introduce MD/NP shared patient panels to better manage complex patients with input from a close colleague;
 - Return to an increase in CNA-level staffing, which some providers felt was popular with patients and facilitated better care, allowing higher-level providers to focus their energies where needed;

²⁹ A summary of this literature can be found here: Schottenfeld L, Petersen D, Peikes D, Ricciardi R, Burak H, McNellis R, Genevro J. Creating Patient-Centered Team-Based Primary Care. AHRQ Pub. No. 16-0002-EF. Rockville, MD: Agency for Healthcare Research and Quality. March 2016. <https://pcmh.ahrq.gov/page/creating-patient-centered-team-based-primary-care>

- Consider investing in job satisfaction and a sense of mastery through non-cash incentives including paid continuing education credits
 - Expand the patient advocate / health ombudsman role to ensure patient perspectives are heard and, potentially, reduce patient grievances.
2. **Risk-adjust patient panels.** Some providers - but not all - expressed concern that because panels were primarily linked to housing units or blocks, some providers are overburdened by complex cases. Many community clinics have overcome this problem by using risk adjustment methods to ensure that patient panels are as equitable as possible according to patient complexity. The goal of risk adjusting can be either to ensure a greater mix of complex and non-complex patients on all patient panels or to allow providers to “specialize” complex cases but to have far fewer patients on their panel as a result. While patient empaneling was also outside the scope of this project, we recommend studying approaches to risk-adjusting panels with input from frontline clinical staff and adopting an approach that is best suited to the strengths and preferences of each institution’s clinical teams.

Recommendation 7. Build on the strength of the current workforce to enhance patient-provider trust

A number of patients and clinicians we spoke with were explicit and passionate in their observation that patient-provider mistrust, moving in both directions, was a key challenge to overcome at both institutions. (It should be noted that this was not unanimous; some clinicians and patients disagreed.) The patient-provider relationship is the fundamental building block in any system’s culture of care with direct consequences for how medical resource capacity is optimized and whether care delivery models function. There are many benefits to strong patient-provider relationships based in mutual trust, including better treatment adherence and fewer patient complaints or grievances.³⁰ We observed excellent medical leadership and clinical teams at both CIW and CCWF but identified several system-level opportunities to build on that core personnel strength and optimize patient-provider relationships. Attesting to the centrality of the patient-provider relationships, many of these are also detailed in prior recommendations. They include:

1. Leverage CDCR Education Initiatives³¹ to expand the healthcare team’s reach and provide patients with access to outside perspectives whose input can help validate and re-enforce institutional care providers. There is currently one medical student / month completing an Obstetrics rotation at CIW, no other trainees at women’s facilities, and no current recruitment of trainees for women’s facilities. Infrastructure and staffing limitations are cited as reasons precluding expansion of the program to CIW and CCWF. Yet our interviews with key stakeholders suggested that women’s institutions are in disproportionately high demand among university partners. Four universities have explicitly requested placements at women’s institutions, including the UC Davis Nurse Practitioner program and the UCSF School of Nursing.

³⁰ There is a rich literature on patient-provider relationships and trust. For an overview, see: MA Hall, et al. Trust in Physicians and Medical Institutions: What is it, Can it be measured, and Does it Matter? The Milbank Quarterly, 2001;79(4):613. Available here: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2751209/pdf/milq_223.pdf

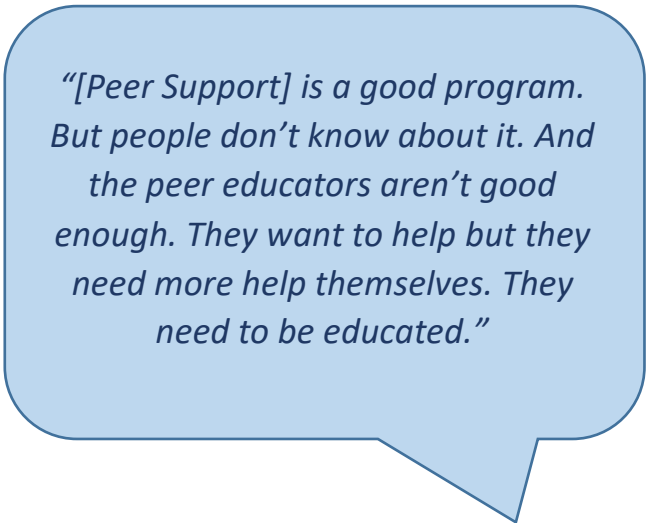
³¹ CDCR Education Initiatives is a relatively new program that aims to increase CDCR’s role in medical training with the primary goal of recruiting emerging providers (especially mid-level providers) into correctional health care in California. Secondary aims of the program include to provide professional development opportunities for current clinical staff to serve as preceptors, mentors, and educators and, ultimately, to expand capacity by adopting a modified teaching hospital model. Trainees are already placed at 14 institutions system-wide.

We recommend that the Women’s Health Program consider developing a comprehensive proposal to make women’s facilities a hub for trainees from outside the CDCR system with particular focus on the proposed Home Health Program. This approach would limit the infrastructural demands on expanding the program and provide women in the general population and Community Supportive Care units with opportunities to: (a) see their primary providers as skilled and experienced mentors and educators, and (b) engage themselves with new and diverse providers. A secondary goal of this recommendation is to, over time, cultivate interest in working in the women’s facilities among emerging providers.

2. Conduct patient satisfaction surveys (can be small sample) and incorporate excellence in patient communication, trust, and relationship building in staff recognition and organizational learning systems (see Recommendation 9). In other patient-center medical home models, including in systems focused on vulnerable patient populations like at the VA, patient satisfaction has been shown to be associated with high clinical quality and lower staff burnout.³² In this and other system, better drawing the connection between patient and clinician satisfaction has proven a worthwhile quality intervention.

3. Hire a dedicated case manager for the Home Health Program at each institution and make patient advocacy a key component in that job description. A number of patients and clinicians we spoke with recommended a reconsideration of the health ombudsperson’s role as currently disconnected from critical issues in care and patient-provider interaction.

4. Continue to develop and invest in the Peer Support Program. This recommendation builds on an existing initiative with strong potential. Peer educators represent a potential “bridging” group that medical leadership and clinical staff should engage to both understand and address commonly believed rumors and inaccuracies in the patient population and increase transparency in clinical care and patient placement decision-making



“[Peer Support] is a good program. But people don’t know about it. And the peer educators aren’t good enough. They want to help but they need more help themselves. They need to be educated.”

This program should also mirror the levels of care, with corresponding levels of training and responsibility. For example, peer educators have the potential to foster better relationships between patients and providers – and provide vital patient education – in the general population. But clinical and correctional staff champions at CIW and CCWF should also partner with CMF to import and adapt their successful Pastoral Care Service Workers program and with leaders at the California Men’s Colony and elsewhere to import and adapt the Gold Coats peer support program for use in the women’s Memory Care units.

Recommendation 8. Leverage opportunities to promote population health

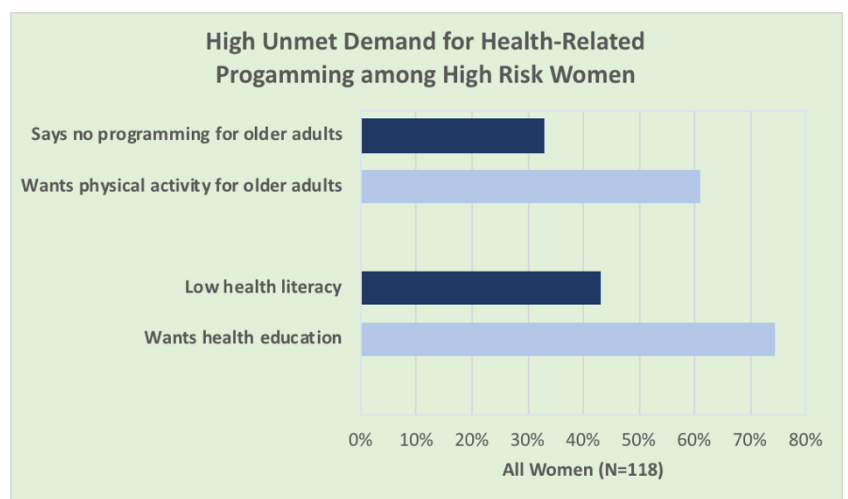
³² For example, see: Nelson KM, Helfrich C, Sun H, et al. Implementation of the Patient-Centered Medical Home in the Veterans Health Administration Associations With Patient Satisfaction, Quality of Care, Staff Burnout, and Hospital and Emergency Department Use. *JAMA Intern Med.* 2014;174(8):1350–1358.

We reviewed all policies relevant to medical bed utilization and, analyzed in tandem with patient and clinical staff interviews, identified a small number of areas where reconsideration of current policy could promote health and reduce pressure on medical bed resources. These include the following recommendations:

1. Complete all “path of travel” construction to reduce fall risk and eliminate unnecessary patient transfers that can result in interruptions in care, patient distress, and avoidable patient-provider conflict
2. Reconsider durable medical equipment policy in two ways:
 - For women 50 or older, reduce restrictions to allow DME in some cases when it may not be clinically necessary but would promote physical activity and social engagement (e.g., older women seeking a walker primarily to be able to carry belongings with them to the yard).
 - For women younger than 50, implement robust functional assessments and require verifiable impairments for DME. (The same approach is recommended for reception assessments of women of all ages.)
3. Eliminate the use of restraints during medical transport and require that all patients receive a standard diet and access to adequate water on transport days. This recommendation addresses two problems we observed:
 - Applying restraints and/or dietary and water restrictions to frail and/or medically vulnerable patients can increase risk of fall, dehydration, pulmonary embolism and other adverse events or directly result in injuries that may be minor in relatively healthy patients but constitute meaningful adverse health events in frail patients.
 - The use of restraints and/or dietary / water restrictions during transport disincentives care seeking among some women, resulting in de facto “refusals of care” that could hasten health decline, particularly in seriously ill patients.
4. Provide all appropriate medically indicated diets to women in all housing types (including general population) as would be provided in the course of community standard care.
5. Provide meaningful activities to women who can no longer work due to age, disability, or a medical condition and expanded access to health-related education and programming for all older and/or seriously ill patients. Meaningful activity and social engagement are critical in the context of aging. Loneliness, for example, is independently associated with functional decline and mortality and old age is the most common time of life for new onset of depression.

Similarly, a number of women reported that available exercise classes were generally targeted to healthy, active residents. Many women reported not feeling comfortable participating in these exercise programs and noted that activities to benefit women primarily concerned with balance, mobility, and modest strengthening were not available. This is important because the benefits of increasing access to appropriate exercise programming and other organized physical activities for older women are great, since exercise is a front-line treatment for many chronic health conditions and a critical component of healthy aging, including maintaining independence late in life.

In addition, some patients expressed the concern that they could not earn good time credits without work and, as a result, many tried to avoid losing work, including efforts to conceal health concerns and/or take inappropriate health risks. For these older adults consider engagement in organized leisure activities to be a form of “retirement” and adequate for the accumulation of good time credits.



In the UCSF Sample, women cited a lack of programming that was accessible to older and/or medically vulnerable women as a primary contributor to social withdrawal and inactivity (both notable health risks), see Figure above. Similarly, many women expressed interest in expanding their activity if options were provided. Two recommended approaches to meeting this health-related opportunity:

- Both CIW and CCWF are well-positioned to build on existing programming to make sure that older and/or medically vulnerable people have access to programming and can engage in healthy lifestyles. In many cases, existing programming could be either expanded or slightly adapted to ensure that an aging or chronically ill cohort has adequate access to these opportunities. We include an incomplete list of existing and potential community partners in Appendix 2.
- The women’s institutions could consider creating a staff member (shared by both institutions) to develop and oversee appropriate, health-promoting programming for an aging population.

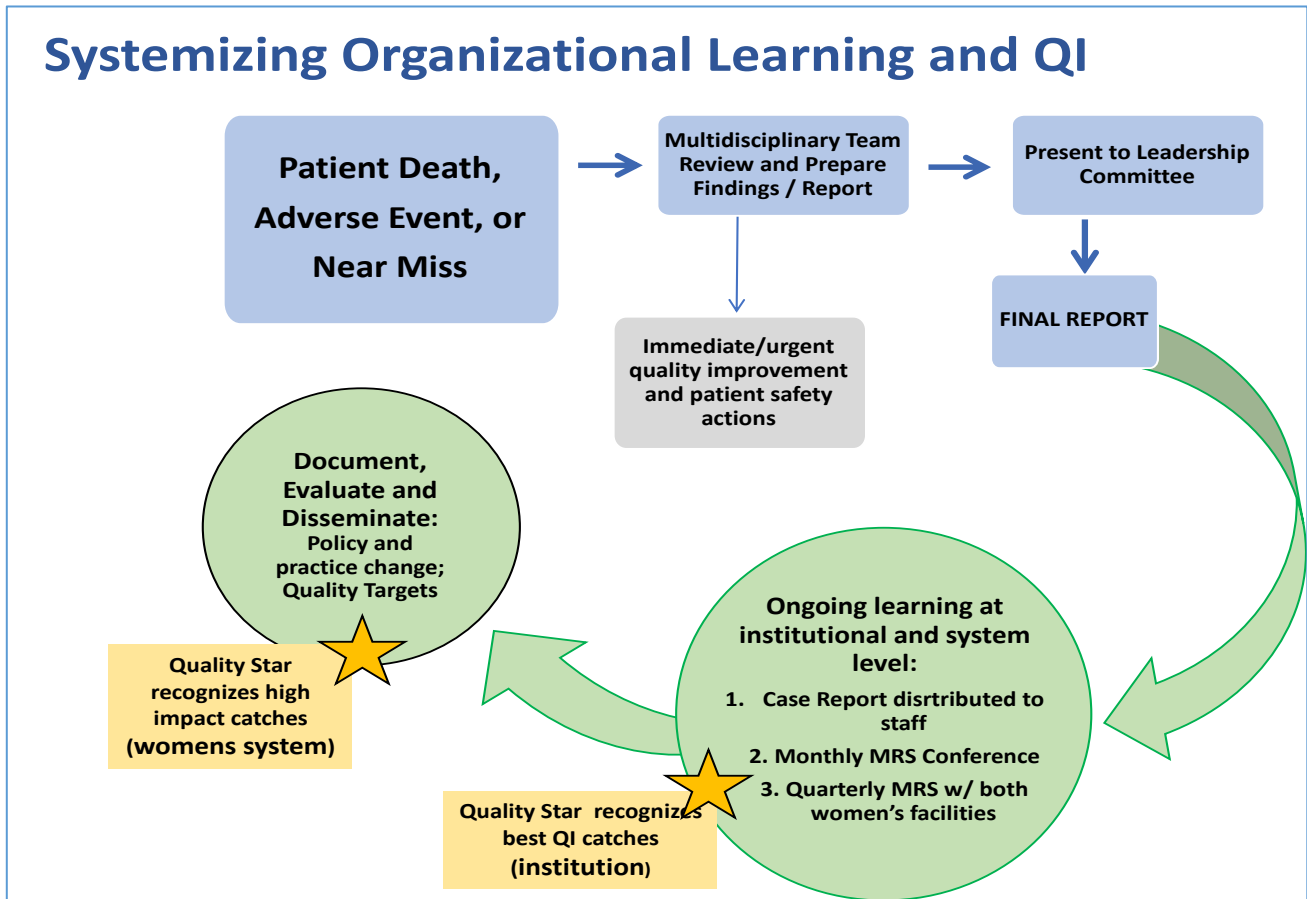
Recommendation 9. Create structures to support organizational learning and corresponding quality improvement

Overall, we found a wealth of expertise, passion, and dedication to patient health and well-being among the clinical staff at CCWF and CIW. As a result, there is a considerable opportunity to create systems that promote learning between the women’s institutions and quality improvement initiatives across the women’s institutions. In the course of this project, we identified at least one example of this potential when we examined prescribing practices for older patients and found nearly perfect compliance with BEERS criteria and best-practice in limiting polypharmacy. We were told that this reflected the outcome of a quality improvement initiative that got exceptional buy-in and local leadership at the women’s institutions.

As the women’s institutions face mounting clinical care challenges related to aging and seriously ill patient populations, leveraging this potential for introspection and organizational learning will be critical. In our discussion of hospice and palliative care, we recommend one such system to promote these processes: the Mortality Review System. However, this basic approach can – and should – be applied more broadly. To accomplish this, we recommend that Women’s Health Program aim to develop an ongoing series of quality improvement and/or patient safety projects specific to the women’s institutions (see Figure, next page) using the following core components:

1. Clinical staff identify an unintended outcome or undesired policy or practice pattern

2. A multidisciplinary team assess relevant cases, including not just clinical care but all related system, processes, and policies and presents their findings to a leadership committee
3. The leadership committee develops a quality improvement and/or patient safety initiative with measurable outcomes and concrete targets and benchmarks
4. The clinical staff that first identified the problem publicly recognized and rewarded
5. The initiative is implemented and outcomes monitored
6. Performance on the initiative according to established benchmarks publicly recognized and rewarded



These recommended principles and components for ongoing and self-sustaining organizational learning and quality improvement should be discussed and adapted by medical team leadership at each institution and in the Women’s Health Program overall in acknowledgement of logistical and practical constraints. The goal in doing so is to arrive at a workable system of self-inspection and reflection resulting in policy and practice changes that can withstand the weight of rigorous evaluation. This final recommendation is, in our view, critical to evaluating whether all other recommendations adequately address the challenges and opportunities they set out to respond to and ensuring that any system gains are sustained going forward.

Appendix 1. Current Medical Risk Classification Scheme

High Risk - Priority 1			
Patients who are High Risk Priority 1 trigger at least two (2) risk factors from the criteria found in the table below			
High Risk - Priority 2			
Patients who are High Risk Priority 2 trigger only one (1) risk factor from the criteria found in the table below			
Flag	Description	Data Source	Timeframe
High Risk Diagnosis/Condition	Patients identified as having a diagnosis classified as High Risk. These diagnoses or combination of conditions are deemed High Risk due to current or future adverse health events. (Each condition meeting "High Risk" criteria is considered one risk factor) See Table 1 Individual Condition Specifications for details	PHIP Claims MHTS EHRs	Current
Multiple Higher Level of Care Events - Medical	Patients with two (2) or more community hospital inpatient admissions. (Excluding admissions for acute/trauma related issues) See Table 2 for excluded diagnoses	CADDIS	365 Days (1 Year)
Prolonged Medical Bed Stay	Patients in CTC, OHU or SNF for more than 90 days (3 months) of the last 180 days (6 months).	PHIP EHRs	
Multiple Higher Level of Care Events - Mental Health	Patients with three (3) or more Mental Health Higher Level of Care admissions (MHCB, IPP, APP, PIP).	MHTS.net EHRs	365 Days (1 Year)
Polypharmacy	Patients prescribed thirteen (13) or more medications. See Table 3 for excluded prescriptions	Guardian EHRs	Current
High Risk Specialty Consultations	Patients with three (3) or more appointments with a "High Risk" specialist(s). (e.g., oncologist, vascular surgeon) See Table 4 High Risk Specialty Consultations for details	TPA Claims	365 Days (1 Year)
Advanced Age	Patients who are sixty-five (65) years of age or older.	SOMS	Current Age
Multiple Medium Risk Diagnoses/Conditions	<ul style="list-style-type: none"> 4 or more Medium Risk chronic conditions. 	PHIP Claims MHTS EHRs	Current
Medium Risk			
Patients with at least one (1) chronic condition who do not meet the criteria for Clinical High Risk Priority 1 or Priority 2. See Table 5 for summary of criteria used to determine potential candidates for Minimum Support Facility Placement (Excluded from the Medium Risk group are patients whose chronic condition(s) are well controlled or at Low Risk for adverse health event)			
Flag	Description	Data Source	Timeframe
One (1) or More Chronic Conditions That Do Not Meet The Criteria For High or Low Risk	One (1) or more chronic conditions, based on current diagnoses, active medications, laboratory tests, or MHSDS enrollment. Also includes MH High Utilization and Permanent ADA affecting placement. See Individual Condition Specifications for details.	Guardian Quest MHTS DECS	Variable
Low Risk			
All patients who do not meet the selection criteria for the High Risk Priority 1, High Risk Priority 2, or Medium Risk categories. Including some patients with medical conditions considered to be well controlled, inactive or otherwise at Low Risk for adverse health events.			
Flag	Description	Data Source	Timeframe
No Identified Chronic Conditions, or Controlled Chronic Condition(s)	<ul style="list-style-type: none"> Generally healthy patients: Patients under age sixty-five (65) with no identified conditions, or Patients with one (1) or more chronic condition(s) that are well-controlled, or currently inactive, and are delineated as Low Risk in the associated Condition Specification. See Individual Condition Specifications for details. <p>Examples:</p> <ul style="list-style-type: none"> Patients with HCV: All patients who meet criteria from HCV definition and have a FIB-4 <1.45 in the past 730 days (2 years) Patients with DM: Not currently on any type of insulin and all HbA1C measurements less than 7.7 for the last 365 days (1 year) 	Guardian Quest	Variable

From: CCHCS, Medical Services; Chapter 29, 4.29.2: Medical Classification System Procedure.

Appendix 2. Incomplete Listing of Potential Community Resources to Expand Relevant Programming

CCWF

Organization	Brief Description	Contact
<i>Promoting Health and Wellness</i>		
Central Valley Medical Supplies	Medical supplier	Fresno 30.8 miles away 559-478-4691
Chowchilla Recovery Center	Public rehab providing multiple kinds of therapy, focusing on mental health	Chowchilla 8.3 miles away 559-665-2947
Heavenly Hounds Pet Therapy	Provide pet therapy through calm animals which provide comfort and reduce stress	Fresno 35.2 miles away 559-450-PUPS (7877)
<i>Promoting Health Literacy</i>		
Central Valley Opportunity Center, Inc	Provides job training, remedial education, housing assistance, energy payment assistance, emergency supportive services, transportation, emergency food, youth employment, health care acquisition, child care services, and community education	Winton 35.7 miles away 209-357-0062
Fresno Women’s Network	Organization working to make a stronger presence of women in Fresno	Fresno 35.4 miles away (559) 450-2102
Madera Community College	Local Community College	Madera 17.2 miles away 559-675-4800
Merced College—Community Services	Local Community College	Merced 27.8 miles away 209-384-6000
<i>Improving Hospice Care</i>		
Alzheimer’s Association, Central California	Provides training on palliative and comfort care	Closest office is 143 miles away 800-272-3900

CCWF

Organization	Brief Description	Contact
Ardent Hospice and Palliative Care	Hospice Care facility dedicated to providing holistic treatment	Fresno 37.6 miles away 559-408-5945

CIW

Organization	Brief Description	Contact
<i>Promoting Health and Wellness</i>		
Care Wear	A nationwide non-profit deploying groups of volunteers who knit, crochet, and/or sew baby items and send them directly to hospitals	Multiple within 40 miles (e.g. Huntington Memorial Hospital, Bernadine Medical Center) 301-620-2858
First Congressional Church of Riverside: Social Justice Book Club	A book club that focuses on reading and discussing relevant issues	Riverside 22 miles away 951-684-2494
House of Ruth	Advocates for women and children who have been victimized by domestic violence	Pomona 16 miles away 909-623-4364
Janet Goeske Center	A non-profit offering classes for seniors in the community: arts and crafts, wellness, recreation, lifelong learning, nutrition, book club	Riverside 22.6 miles away 951-351-8800
La Sierra Senior Center	Run by the City of Riverside Parks and Recreation and Community Services Department, they provide a multitude of senior classes	Riverside 11.5 miles away 951-351-6435
Riverside County Office on Aging: Fit after 50 Program	Exercise program designed by people at California State University, Fullerton to increase strength, balance, and mobility in older adults	Riverside 26.3 miles away 951-867-3800
Soroptimist House of Hope	Offers a wide variety of counseling and substance abuse help along with meditation groups, anger management, parenting education and more	Banning 50 miles away 951-849-9491

CIW

Organization	Brief Description	Contact
Ultraviolet	An organization that advocates for the equality of women in all realms	weareultraviolet.org

Promoting Health Literacy

Cal Poly Pomona	Has a variety of outreach programs, aimed at engaging the community in the sciences	Pomona 17.7 miles away 909-869-3600
Chaffey Adult School	Provides education to adults in need of basic academic skills	Ontario 13.7 miles away 909-391-5365

Improving Hospice Care

Ambercity Hospice	Delivers hospice care to people at their homes	Riverside 15.7 miles away 951-686-8100
Alzheimer’s Association, Southland Chapter Inland Empire Regional Office	Can educate inmates about hospice care and palliative care	Ontario 13 miles away 323-309-8821
Divine Care Hospice	Delivers hospice care to people in their residences	Riverside 951-880-7175
Hospice of the Valleys	Non-profit delivering hospice care to lower income individuals	Murrieta 42.6 miles away 951-200-7800
Inland Valley Hospice	Hospice organization heavily reliant upon volunteers	Riverside 17.6 miles away 951-950-4274

Brie Williams, MD, MS & Cyrus Ahalt, MPP
The Criminal Justice & Health Program at UCSF

with

Rebecca Brown, MD, MPH

Michele Casadei, BS

Rachel Ekaireb, BA

Lori Holleran, PhD, MPH

Heather Leutwyler, RN, PhD, FNP

Alicia Neumann, PhD, MPA

Assessing Medical Bed Utilization among Women in the CDCR

*A Report Prepared for the Women's Health Program
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**Criminal Justice & Health
Program at UCSF**