Report to the Department of Planning and Budget and
Chairmen of the House Appropriations
and Senate Finance Committees

Long-Term Facility Needs for Medical Services in the Department of Corrections

Virginia Department of Corrections
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Executive Summary

The 2018 Special Session I Acts of Assembly, Chapter 2, Item 391, P., directs the Department of Corrections (DOC) to report on its long-term facility needs with respect to providing medical care to the state responsible (SR) offender population:

> *The Department of Corrections shall assess its long-term facility needs with respect to providing appropriate levels of medical and mental health care to its offender population. At a minimum, the assessment shall include (i) a summary of the Department's existing clinical, geriatric, assisted living, and mental health capacity, and an assessment of the sufficiency of this existing capacity to meet the current and future needs of the Department's offender population; (ii) a prioritized list of capital projects which may be needed to address the Department's current or future needs for capacity in relation to (i) which shall include a discussion of the methodology used by the Department to prioritize projects and the estimated cost of each project; and, (iii) a short-term plan to house offenders in a manner which reduces the risks related to transmittable diseases. The Department shall provide the results of its assessment to the Director, Department of Planning and Budget, and the Chairmen of the House Appropriations and Senate Finance Committees no later than October 1, 2018.*

The DOC houses more than 30,000 offenders each year, many of whom arrive with immediate medical needs that often stem from a lack of regular healthcare prior to incarceration. In addition to chronic conditions, many offenders come to the DOC with serious conditions arising from years of substance abuse and with infectious diseases such as HIV, Hepatitis, sexually transmitted diseases, and tuberculosis.[1]

The DOC is meeting its constitutionally-mandated duty to provide a community standard of care to the offenders in its custody; however, current correctional settings are not designed to provide the level of care required by many in the SR population. The DOC faces rising costs, which create challenges to providing higher levels of care, especially given the number of offenders needing specialized care.

Deficiencies in medical facilities and physical plants, space restrictions, limited staffing (both medical and security), and insufficient technologies create operational, financial, and legal hardships.

[1] Anno, B. Jaye (2001). *Correctional Health Care: Guidelines for the Management of an Adequate Delivery System.* Chicago, IL: National Commission on Correctional Health Care. p. 264.

Key Findings

FINDING #1: Male Medical Bed Focus

This report focuses primarily on the medical bed space needs of the male SR population. The immediate need for capital funding and construction to address the needs of DOC's male population is urgent. While there is a need for female medical bed space, female long-term care beds, and female and male mental health beds, DOC is not in an urgent situation now or in the near future with respect to meeting these specific needs.

NOTE: There could be a future request to address female medical/mental health needs or male mental health needs; however, this report focuses primarily on the urgent male medical situation.

FINDING #2: Critical Need for 324 Infirmary Beds

The need for infirmary beds is paramount. The current number of male infirmary beds is critically short of meeting the demand. The DOC needs to construct 192 additional infirmary beds and replace 79 infirmary beds at Powhatan Medical Unit and Deep Meadow Annex, for a total of 271. This need will increase to approximately 324 by FY2024. Data from September 2018 show that correctional facilities across the state have 41 offenders who have an immediate need for an infirmary bed, but are being managed in a non-medical bed because no infirmary bed exists. This creates challenges for staff and offenders. Additionally, it can cost $3,000 per day to manage offenders off-site in a leased infirmary bed.

FINDING #3: Assisted Living Beds Mostly Managed without Construction

The DOC needs to convert additional housing units to hold 74 assisted living beds. Deerfield Correctional Center was designed to accommodate future growth in assisted living bed space through undoubling of bunks and expanding the floor space needed for each bed. The long-term plan, which is being implemented, was to have the dormitories constructed in 2007 converted one at a time as the need for assisted living beds grew. Deerfield currently has one dorm with 57 assisted living beds for male offenders and, as of September 2018, has an additional 69 offenders waiting for an assisted living bed to open. The DOC predicts needing 74 new assisted living beds by the close of FY2019, increasing to 90 by FY2024. While the DOC is prepared to convert housing units to assisted living units, this conversion will not fill the entire assisted living bed space gap nor provide the treatment or support space required (see Finding #5). Approximately 30 assisted living beds are not accommodated by the conversion.

FINDING #4: Critical Need for 115 Nursing Home/Skilled Nursing Beds

The DOC needs to construct 115 beds, including 34 nursing home/skilled nursing beds, 46 dementia beds, 30 assisted living overflow beds, and 5 end-of-life beds. As of September 2018, the DOC has 26 offenders waiting for a nursing home/skilled nursing bed, yet no beds of this type currently exist in the DOC inventory. The Department expects that the age 50 and older offender population will continue to utilize medical beds at the same rate that they have for the past six years. In order to provide nursing home/skilled nursing beds, DOC would lose an entire housing

pod of general population beds. These beds require more floor space than either general population or assisted living beds and have larger accompanying medical support space needs. At the time of Deerfield's planning and design, the DOC could not predict that the geriatric SR population would increase this dramatically and with the need for this type of bed.

FINDING #5: Critical Need for Medical and Support Space for Infirmary and Long-Term Care

In addition to bed space, clinical space for diagnosis and treatment associated with both types of beds is required. Support space such as pharmacy, nursing stations, clean and soiled laundry areas, recordkeeping, etc., are also a critical part of the DOC infirmary and long-term care need. Associated space for long-term care also includes significant physical therapy and medical equipment space.

FINDING #6: Capital Funding Needed for Construction of Infirmary and Long-term Care Space

At Powhatan, construction of a medical building to include infirmary bed space plus all medical and support space is necessary.

At Deerfield, it will be necessary to construct a medical building that includes additional infirmary beds, nursing home/skilled nursing bed space, dementia ward, and assisted living space not provided by conversion of dormitories, plus all medical and support space.

FINDING #7: Prioritization of Capital Requests

The cost of leased off-site infirmary beds to manage the overflow is $3,000 per day per offender as compared to $1,000 per day per offender for leased off-site long-term care beds. The interim plan to manage the overflow of offenders needing long-term care beds is better clinically than the interim method of dealing with the infirmary bed situation. These factors make the infirmary request at Powhatan a priority over the long-term care bed request at Deerfield. However, both needs are extremely important and optimally would be seen as one DOC medical master plan need.

Definitions

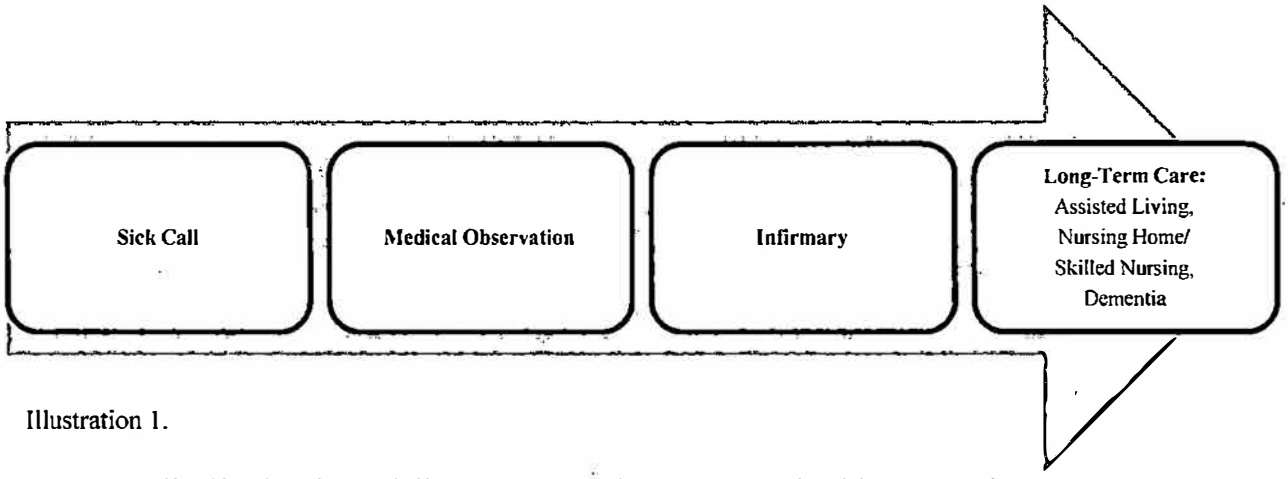

Illustration 1.

Sick call: All offenders have daily access to and may request healthcare services.

Medical Observation: Short-term housing for offenders who need to be assessed within 24 hours. At DOC, most facilities have medical observation beds.

Infirmary: Infirmary is defined by the National Commission on Correctional Health Care (NCCHC) as "an area within the confinement facility accommodating two or more offenders for a period of 24 hours or more, expressly set up and operated for the purpose of caring for patients *who are not in need of hospitalization or placement in a licensed nursing care facility* (emphasis added)."[2] Infirmary care in the DOC provides healthcare for sick or injured offenders, acute illness and injury patients, select chronic condition patients, and assisted living and skilled care patients. At DOC, infirmaries are located at (1) Powhatan Correctional Center (including Deep Meadow Annex), (2) Greensville Correctional Center, and (3) Deerfield Correctional Center.

Acute Care: Individuals have a sudden onset of serious illness usually requiring hospital levels of care. Off-site hospital beds are contracted with VCU Medical Center and Southampton Memorial Hospital.

Long-Term Care: A continuum of medical services designed to support patients with chronic or permanent conditions that includes (1) assisted living, (2) nursing home/skilled nursing care, and (3) dementia. At DOC, assisted living long-term care beds are located at Deerfield Correctional Center; other long-term care bed types are needed at Deerfield.

Assisted Living (AL) Care: Individuals need assistance with one or two of the six nationally recognized major activities of daily living (ADLs)—bathing, dressing, transferring (i.e. getting out of bed, onto wheelchair, etc.), toileting, continence, and eating—but otherwise are able to function independently, require minimal medical support, have little or mild cognitive impairment, and can be housed in standard single-level bunks. At DOC, assisted living care is located at Deerfield Correctional Center.

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[2] Anno, B. Jaye (2001). *Correctional Health Care: Guidelines for the Management of an Adequate Delivery System.* Chicago, IL: National Commission on Correctional Health Care. p. 169.

Nursing Home (NH) Care/Skilled Nursing Facility (SNF) Care: Individuals needing assistance with three or more ADLs and needing regular care to address at least one chronic medical condition are considered to be in nursing home care. Many require more intensive care from a licensed professional. Individuals may have more significant memory impairments, which may require a locked ward to guard against elopement. Depending on the individual's situation, a hospital-grade bed with medical equipment may be required. Individuals requiring end-of-life care, needing severe dementia care, or requiring other acute illness care are considered to need skilled nursing facility care. Individuals must be housed in a hospital-grade bed and be located in a medical unit equipped to handle the severity of cases. At DOC, this level of care should be located at Deerfield, but is currently lacking. Nursing home/skilled nursing beds are contracted with Southampton Memorial Hospital.

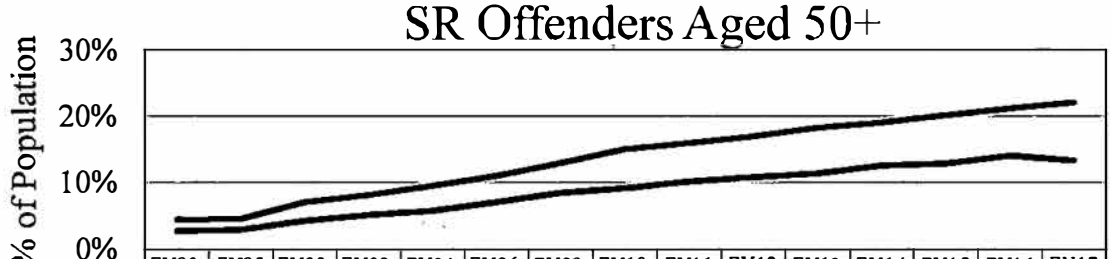
Rehabilitative or Recuperative Care: Individuals require hospital level of care after surgery, a procedure, or an illness, sometimes referred to as a step-down unit. At DOC, a unit for this level of care is currently lacking.

Existing Medical Care in the DOC

Population Trends

Individuals aged 50 are typically not considered to be "geriatric" in the general public. However, in correctional settings this group tends to exhibit the effects of aging much more severely than their non-incarcerated peers due to lack of care for mental and physical health issues and lifestyle choices prior to incarceration. Therefore, DOC defines incarcerated individuals 50 years or older as "geriatric."

According to the U.S. Bureau of the Census, Virginia's population age 55 and older has grown by more than 57% since 2001. Within the DOC, two demographics—the State Responsible (SR) Confined population age 50 and older and the SR New Court Commitments (NCC) population age 50 and older—have increased 300% since the year 2000.



	FY90	FY95	FY00	FY02	FY04	FY06	FY08	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
ConfinedPercent	4.5%	4.6%	7.1%	8.2%	9.6%	11.1%	13.0%	15.1%	16.0%	17.0%	18.3%	19.1%	20.2%	21.2%	22.1%
NCC Percent	2.8%	3.0%	4.3%	5.2%	5.8%	7.1%	8.5%	9.2%	10.2%	10.9%	11.4%	12.6%	12.9%	14.1%	13.3%

Chart 1.[3]

Sentencing trends show that NCC offenders age 50 and older are the fastest growing demographic in the DOC. The *FY2016 Geriatric Offenders in the SR Population* report notes that 79% of confined 65 and older offenders were sentenced for a violent crime while 61% of the 50-64 population and 54% of the under 50 population were sentenced for violent crimes.[4] In addition to being sentenced at an older age, this population is also serving longer sentences, keeping them in the custody and care of the DOC well into their geriatric years when healthcare needs are typically the greatest.

The average annual growth rate in the 50 and older SR confined population has been 4.6% over the last six years. By 2023, the DOC estimates over 10,000 offenders in this age group. By 2032, there will be 15,000 in this age group, and by 2039, the DOC estimates having more than 20,000 offenders in this age group.

[3] VADOC Statistical Analysis and Forecast Unit. (September 2018). *Medical & Geriatric Population Trends.*
[4] VADOC Statistical Analysis and Forecast Unit. (January 2018). *Geriatric Offenders within the SR Population.*

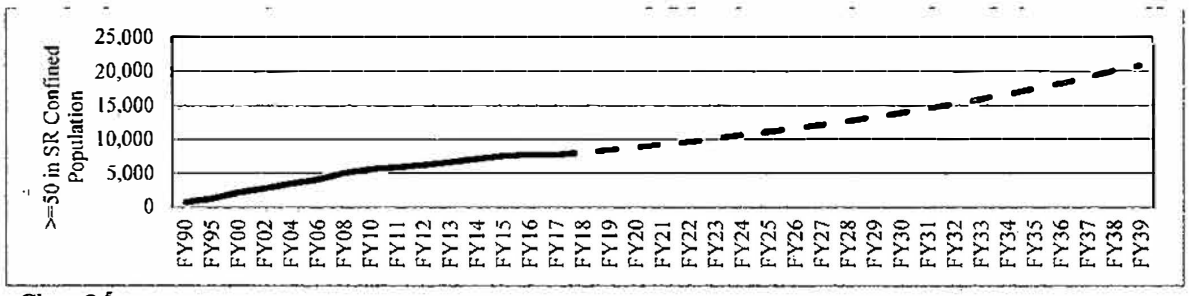


Chart 2.[5]

In short, the DOC SR population is coming in older and sicker and staying longer.

Factors Impacting Medical Beds

Across the Department, there are 143 male infirmary beds. The number of infirmary beds in the DOC does not meet the current need for DOC-housed male offenders needing infirmary care. The DOC houses approximately 26,000 male offenders at any given time. Per DOC Operating Procedure 720.1, Access to Health Services, when any incarcerated offender requires a higher level of care than can be provided at the assigned facility, he is moved to one of the three available infirmaries.

Many of the infirmary beds are occupied by offenders in the 50 and older population. Data from June 2014 through June 2018 show that 2.5% of the age 50 and older offender population statewide consistently occupy a medical bed while only 0.4% of the <50 population consistently occupy a medical bed. For FY 2018, the average length of stay in a medical bed was 32 days per offender (median length of stay is 4 days).[6]

Many factors, including unforeseeable situations, place extra stress on the infirmary capacity. A lack of long-term care beds forces the DOC to place long-term care offenders in infirmary beds, either displacing a current infirmary patient or creating a situation where other infirmary-qualified offenders are moved to non-medical areas or housed in observation beds because of the lack of infirmary beds. As of September 2018, the DOC had 41 offenders in need of an infirmary bed housed in non-medical settings.[7]

Patients returning from a hospital bed who need post-acute, convalescent, or rehabilitation care may need care beyond observation. They may be placed in an infirmary bed, pushing a current infirmary bed occupant into a medical observation bed or non-medical area. In some cases, the DOC may be forced to house them in a contracted bed at VCU Medical Center at $3,000 per day until a DOC infirmary bed becomes available.

By the National Commission on Correctional Health Care (NCCHC) guidelines, infirmary beds should only house offenders temporarily, that is, until the individual is discharged or has

[5] VADOC Statistical Analysis and Forecast Unit. (September 2018). *Medical & Geriatric Population Trends.*
[6] VADOC Statistical Analysis and Forecast Unit. (September 2018). *Medical & Geriatric Population Trends.*
[7] VADOC Statistical Analysis and Forecast Unit. (September 2018). *Medical & Geriatric Population Trends.*

deteriorated to the point that hospitalization is needed. Of these other practices mentioned above, which occur nationally, the NCCHC has said "[t]his is not acceptable...it can result in the denial of infirmary services to patients in need because of lack of available beds."[8] Likewise, housing patients recovering from illness or surgery in an infirmary bed unnecessarily ties up the infirmary bed with a non-infirmary patient who only requires rehabilitative or recuperative care (the DOC currently does not have this classification of bed).

Summary of Beds and Bed Space Needs

The DOC has three infirmaries statewide for male offenders. An assessment of the sufficiency of these facilities follows:

Powhatan Medical Unit (PMU) is a 40-year old building designed in the 1970s. Although centrally located in the state and close to VCU Medical Center, the building itself is not appropriate for infirmary care and cannot be adapted to current standards for infirmary care. The mechanical system does not meet current code for total air volume or outdoor air volume, and the air distribution is not configured to avoid clinic-acquired infection. Medical gas, electrical, and nurse call systems are not integrated and are provided *ad hoc* as portable systems, challenging clinical staff to provide appropriate support and making it difficult to avoid infection. The physical layout does not allow the clinical staff to practice in the ways that community care facilities have moved toward in order to limit infections. Other medical building deficiencies include:

- Inadequate nursing, hand wash, and charting stations;
- Inadequate space to provide service and cleaning for clinical equipment;
- Lack of clinical equipment storage;
- No separate facilities for managing clean and soiled laundry; and,
- An inappropriate dormitory care setting.

Deep Meadow Annex was created out of the existing infirmary bed crisis in the DOC. One dormitory style housing unit was converted to a medical ward with 33 beds. However, this setting is not conducive to preventing disease transmission. This conversion also reduced general population beds. Once new infirmary beds are obtained by the DOC, this unit will be converted to a rehabilitative care unit.

Deerfield Correctional Center's 18-bed infirmary is inadequate to address the needs of the current inmates. Medical office, support, and storage spaces for extensive medical equipment are not sufficient to adequately provide for the needs of the staff or the offenders. The medical unit is crowded and not conducive to providing adequate care and supervision. Typically, 13-15 offenders who should be housed in a nursing home/skilled nursing bed are housed in the infirmary because of a lack of those beds, meaning there are few infirmary beds available on any given day.

Deerfield's current assisted living pod consists of a dormitory style housing unit that contains single level bunks with extra space for mobility equipment and handicapped accessible common

[8] Anno, B. Jaye (2001). *Correctional Health Care: Guidelines for the Management of an Adequate Delivery System.* Chicago, IL: National Commission on Correctional Health Care. p. 169.

areas and bathrooms. In addition to not containing enough assisted living beds to accommodate current need, this pod contains hospital style beds along one wall that houses offenders needing a higher level of care.

Deerfield currently has no nursing home/skilled nursing beds. Currently, there are 26 offenders needing nursing home/skilled nursing care immediately who are housed in general population beds. Additional offenders needing nursing home/skilled nursing beds who cannot be accommodated at Deerfield are housed at Southampton Memorial Hospital at a rate of $1,000 per offender per day. There are 46 offenders diagnosed with various stages of dementia who need this type of setting, but are managed by necessity in a general population setting.

Transport Risks

Transporting offenders for off-site medical care creates safety concerns and financial challenges. Each medical transport requires two correctional officers (COs) to escort each offender for Level 2 and above and these COs remain with that offender until he or she is returned to a DOC facility. The absence of these COs at their institutional posts creates a staffing strain on already short-staffed facilities. Public safety is jeopardized by transporting offenders to public medical facilities where the risk of escape is greater. Corrections experts agree the risk of prison escapes is greatest during medical transports and hospital stays.

There are substantial risks associated with transporting offenders who potentially could be treated inside of a DOC facility or housing offenders in hospitals because infirmary beds are unavailable. These risks could be reduced if the DOC had adequate infirmary space to house and treat offenders who are now being transported outside of the secure perimeter for medical care. A 2017 study by VCU even notes that "[f]inding ways to convert off-site visits to on-site care provision could have a significant impact on both healthcare costs as well as transportation and security costs."[9]

In 2016, the DOC made 1,150 medical transports in which the median length of stay in the hospital was 6 days. This number increased to 1,230 in 2017, with the final number for 2018 projected to be 1,310 medical transports. More than 50% of these transports each year involved offenders age 50 and older.

The monthly average number of transports lasting more than 48 hours over the past three years is 109 with the average length of stay being 25 days. The DOC estimates, based on these figures, the number of infirmary beds needed today[10] to reduce the number of medical transports and hospital stays is 90.[11]

109 Transports x 25 Days = 2,725 Bed Days ÷ 30.4375 Days/month = 90 Beds

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[9] Watts, C. A., & Bracken, R. M. (2017). *Report to the Virginia Department of Corrections in partial fulfillment of Memorandum of Agreement DOC-15-098 MOD 001.* p. 16.

[10] The DOC does not currently have an electronic health record system. Data pulled from the offender information system, VACORIS, on offender medical transports was used to calculate the number of infirmary beds needed.

[11] Statistical Analysis and Forecast Unit. (September 2018). *Medical & Geriatric Population Trends.*

Summary

The DOC's infirmary bed need is projected to get worse over the next several years. The Total SR Population is projected to grow by less than 1% over the next six years while the SR population age 50 and older is projected to grow by 4.6% *each year* over the next six years. The DOC also expects to see 2.5% of this growing age 50 and older population needing a medical bed every day.

Using these projections, the DOC estimates the following medical bed needs:[12]

	Male Medical Bed Needs		Existing Male Infirmary Beds	Additional Male Infirmary Beds Needed		Additional Male Assisted Living Beds Needed	Additional Male Nursing Home Beds Needed
	Minimum	Maximum		Minimum	Maximum		
FY2019	437	501	143	192	256	74	28
FY2020	450	514	143	201	265	77	29
FY2021	464	528	143	211	275	80	30
FY2022	479	543	143	221	285	83	31
FY2023	495	559	143	233	297	86	33
FY2024	511	575	143	245	309	90	34

Short-Term Plan

The DOC has created a long-term plan to address the infirmary needs in the Department. The plan will be implemented in multiple phases as funding is made available. The interim plan is to convert additional dormitory-style housing units at Deep Meadow Correctional Center to an open ward that would serve as an infirmary overflow area associated with Powhatan Medical Unit for sick patients. This plan can be implemented immediately pending funding. This conversion will provide an additional 60 infirmary beds.

A prior dormitory conversion at Deep Meadow was completed in early 2018. The DOC adopted this plan to address the immediate infirmary bed shortage; however, it inadequately addresses infection control and isolation needs and will ultimately require a more long-term solution. However, without specific funding for new infirmary space, the DOC may need to continue to pay for beds off-site at VCU Medical Center at $3,000/day and/or Southampton Memorial Hospital at $1,000/day, as well as deal with short staffing at institutions due to COs being off-site for medical transports.

Simultaneously, a housing unit at Deerfield Correctional Center would need to be converted to a nursing home/skilled nursing unit until funding is provided to construct an adequate facility for this need. This conversion would create 60 beds for male offenders needing help with three or more ADLs. This plan displaces approximately 78 general population beds, which in turn will

[12] Statistical Analysis and Forecast Unit. (September 2018). *Medical & Geriatric Population Trends.*

create a larger backup of SR offenders in the jails. However, as 13-15 nursing home/skilled nursing offenders occupy infirmary beds on any given day, the creation of this unit will free up medical beds in the infirmary for their intended purpose and provide an improved situation for treating those needing nursing home/skilled nursing care at Deerfield. The plan will also convert the current visitation building into a physical therapy unit to accommodate the existing need plus the increase in offenders needing physical therapy services. A mobile unit would be installed as the new visitation building by necessity to replace the lost visitation space. This plan would require additional funding and resources.

Conclusion

Capital funding is critical to meeting these needs. The interim solutions the DOC is able to implement fall short of adequate in the long run; however, the DOC will continue to manage the situation operationally to the best of its ability. The Department's skill in managing difficult situations will ensure the safety of the SR population and the Commonwealth until the problem can be solved through capital funding.

Data generated for this report revealed the prior year capital requests were not adequate to provide a long-term sustainable plan for the future. In order to address current and future needs, it is clear the path forward must include construction.

A new 324-bed medical building will need to be constructed at Powhatan. Once the new infirmary is in use, the old infirmary (PMU) will be demolished and the three Deep Meadow units converted to infirmary space will become a rehabilitative step-down unit where offenders returning from hospital stays will be housed before being reassigned to a GP setting. This infirmary will provide enough infirmary space to accommodate most of the serious medical cases in the DOC and provide flexible space for some procedures that are now done on an outpatient basis.

Additionally, **a new 115-bed medical building will need to be constructed at Deerfield Correctional Center** to accommodate the increase in geriatric and long-term care offenders. One feature of this new building would be a secure dementia wing that provides an "endless hallway," which is a looped hallway designed to allow dementia patients to wander safely while being monitored by staff. The current Deerfield infirmary space will be used for the Deerfield general population who have less serious medical needs, sick call, and much needed office and medical equipment storage space. This proposed medical building will also allow for on-site clinics Deerfield cannot accommodate now, reducing off-site medical trips.

The cost of leasing these beds off-site at $3,000 per inmate per day (infirmary) and $1,000 per inmate per day (long-term care bed) provide a short-term payback for construction and make it clear the DOC will be in a better financial position by constructing these beds.