

HAMPSHIRE COUNTY COUNCIL

Decision Report

Decision Maker	Executive Member for Adult Social Care and Health
Date:	11 January 2021
Title:	Cobots in Care Programme
Report From:	Director of Adults' Health and Care

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Purpose of this Report

1. The purpose of this report is to seek permission from the Executive Member for Adult Social Care and Health to spend in relation to the provision of Co-operative robotic devices (Cobots) to support the effective delivery of care services, in particular with a view to supporting paid carers in the performance of their tasks. Our aim is to also impact on the levels of double up care required using the support Co-operative robotic devices provide.

Recommendation(s)

2. That the Executive Member for Adult Social Care and Health give approval to spend up to £4.1million over 5 years to source Cobots to support the delivery of the Hampshire Cobots transformation programme.

Executive Summary

3. This report seeks to provide background to the 'Cobots' programme, outline the options that were considered for the future direction of the programme and preferred option, outline the financial position and describe how performance against the programmes objectives will be monitored and managed.
4. Adults' Health and Care undertook an initial pathfinder throughout 2020 to explore the viability of using Cobots in care settings. A cobot is a device that is worn by a person (in this case around the lumbar region) that assists the wearer to carry out normal manual functions, like moving an object or person, with more ease. The purpose of the Pathfinder was to establish the extent to which Cobots could contribute to greater efficiency in care delivery, in particular impacting on the levels of 'double up care' delivered (where two

formal carers are required) as well as delivering additional benefits like reduced sickness rates, more attractive working conditions and ultimately staff retention.

5. Based on findings from the pathfinder evaluation, there is a strong economic and outcome efficacious business case for the mainstream deployment of Cobots across both internal and external Social Care settings
6. It is recommended that the County Council proceed to a controlled roll out of Cobots, focusing on embedding 'Cobots as a tool' to enhance care delivery with targeted providers within year 1, with a view to then mainstreaming 'Cobots as Default' (Cobots always considered the 2nd carer unless good reason not to) from year 2 onwards.

Contextual information

Background to the project

7. In October 2019, Hampshire County Council launched a pathfinder to explore the potential value of Cobots in care delivery. The key areas we wished to explore through this pathfinder were:
 - What role technology could play in helping us support formal carers
 - Whether this work could assist the County Council and the care sector address the workforce challenge that is likely to face us over the next decade (estimates are that by 2025 we may be facing a shortfall of up to 6,000 paid carers)
 - How we could use innovative technology to support carers with the physical demands of caring
 - Explore what opportunities there may be to support informal carers and family members
 - Explore how we could impact on established patterns of care delivery like 'double up' care so freeing up workforce capacity and contribute to more efficient delivery of packages of care for the County Council.
8. Six lumbar type Cobot devices were sourced for 6 months to enable us to explore how this technology could be used to address our key areas of interest and whether there was any benefit in pursuing the use of Cobots further. From January to August 2020, 18 carers (paid and unpaid) across 6 different care settings in Hampshire wore the device to determine its effectiveness in routine care practice.
9. **The objectives of the Cobot pathfinder are summarised below:**
 - **Performance:** exploring if and how Cobot technology can support care workers do their job more effectively and/or efficiently
 - **People:** spearheading a positive culture around future of care technology - sparking enthusiasm amongst the workforce
 - **Technology:** developing a specification for future Cobot technology development in UK care sector

- **Operations:** identifying operational and training requirements that could be applied to any future Cobot deployment
- **Finance:** determining if and how Cobot technology can impact on the financial pressures faced by Hampshire County Council
- **Relationships:** strengthening relationships with providers, professional bodies, government departments
- **Regulation:** understanding/informing regulatory requirements that may impact any future Cobot deployment

Evaluation of the Pathfinder

10. The evaluation of the Pathfinder showed that in all domains there is a demonstrable role for Cobots in care delivery and in assisting the County Council in its programme of modernising care services.
11. Feedback gathered from carers, providers, managers, service users, Hampshire County Council Occupational Therapists and others, demonstrate that the cobot enhances effective moving and handling techniques and provides physical support around the lower back when delivering care and reduces overall fatigue and aches/pains, makes them feel more confident and makes the job easier.
12. Additionally, in a significant number of cases the devices enabled carers to deliver services more independently, without the need for a second carer.
13. However, like all care technology, there are limitations. Key limitations are: size of the Cobot needs to account for all users; and effective implementation requires a significant change management approach. However, if the limitations are addressed and overcome, and if implemented appropriately, Cobots have potential to deliver a whole range of benefits for the care system.
14. A key objective of the Cobots pathfinder was to understand whether Cobots can impact on the financial pressures experienced by Hampshire County Council.
15. A desktop review of double-up older adult care packages suggests that there is significant scope to reduce double-up care packages with the support of Cobots. The findings were used to develop a set of conservative assumptions that between 13% and 26% of double up packages could be reduced using Cobots.

Options considered

16. Based on the findings from the Cobots pathfinder exploration phase, there are four options that is has now been possible to consider for Cobots. These are summarised below:
 1. **Do nothing:** Hampshire County Council opts not to proceed further with Cobots.

2. Do minimum: Lease and deploy 2 Cobots as a training aid for Workforce Development to use to reinforce good moving and handling technique amongst care staff

3. Proceed to a managed expansion of cobots: focusing on embedding 'Cobots as a tool' to enhance care delivery with targeted providers, care workers and service users where we know it will have greatest impact (invest in 63 cobots for deployment in Year 1)

4. Move directly to mainstreaming cobots in care delivery: with the intention of establishing 'cobots by default' deployed in the maximum number of double-up cases (invest in a further 64 (total 127) Cobots in Year 2).

17. A hybrid option of option 3 transitioning to option 4 at the end of year 1 (*rather than moving immediately to option 4*) has several delivery advantages:

- ensures the project team have the required time to manage the complexity of the implementation and build the necessary insight and capability within Hampshire County Council to subsequently mainstream Cobots
- allows Adults' Health and Care to carefully develop and implement a robust change management plan for operations.
- allows the project team adequate time to develop the processes (such as allocation of devices and targeting of resources with external partners), systems, relationships internally and externally, and expertise necessary to sustainably support the mainstreaming of Cobots at the scale set out in Option 4.

Finance

Financial requirements

18. This project is one strand of many projects that support the delivery of the departmental transformation savings under Transformation to 2021. As such the cost of the Cobots, for which approval is being sought in this paper, will be met from within the departments existing resources through the delivery of savings directly attributable to the roll out of this technology, as will any other associated project costs.

19. When fully implemented, the recurring reduction to existing care costs this project is anticipated to achieve exceeds the annual cost of the project, by an estimated £0.62million annually. Thereby both delivering a significant contribution to Transformation to 2021 savings and absorbing all associated project costs. The evaluation of Cobots demonstrated that the council could impact positively on the provision of between 13% and 23% of doubled up care packages using these devices (where two paid carers are provided to deliver care) and therefore reduce the financial burden on the public purse whilst freeing up workforce capacity at the same time.

20. The £4.1million requested in this report is the maximum expected spend over the 5 year period based on a final volume of Cobots of 127. However, it is

planned that the increase in Cobots to this level will be gradual and phased over the first two years. We also plan to procure future devices on the basis of lease in the first instance with the opportunity to review commercial arrangements once the Cobots programme is embedded and delivering against outcomes including financial targets. This plan provides opportunity to review the achievement of savings and assess likelihood of further savings at regular intervals prior to undertaking a commitment of further Cobots, thereby safeguarding the Department's exposure to risk of unnecessary expenditure. The costings for the devices will include all associate costs, including shipping, warranties and maintenance and the device itself.

Performance

Governance

21. Governance for the Cobots in Care Programme will focus on two elements.
 1. The management of the programme, with key interest in logistics, procurement, legal matters, programme management, training, provider relationship management and benefits realisation reporting
 2. Cobots by default. Operational transformation, embedding 'Cobots by default' into social care practice, management of transforming approach to double up care and ownership of the cost efficiencies programme.
22. These two elements of the programme will have their own board structure reporting and accountable to the overall departmental transformation governance via the Deputy Director for Adults' Health and Care.

Consultation and Equalities

23. It is for the Executive Member as Decision Maker to have due regard to the need to: eliminate discrimination, harassment, victimisation and any other conduct prohibited under the Equality Act and advance equality of opportunity and foster good relations between persons who share a relevant protected characteristic and persons who do not share it.
24. Full equalities impact assessments have been undertaken and are included in the appendix.
25. The analysis of the Equalities Impact Assessment demonstrates that impacts are either neutral or positive across most areas, with Pregnancy and Maternity showing a Medium impact. The pathfinder has highlighted areas where we are able to enhance the impact positively, for example, in relation to Gender. Our finding showed that we needed to ensure a range of sizes are available to fit European body types so we will include this requirement in specifications going forward.

Conclusions

26. The Cobots in Care Transformation Programme follows an extensive pathfinder exercise that was designed to explore how co-operative robotic devices could help Hampshire County Council support the delivery of care. In

addition, how these devices can support carers to deliver care more effectively and benefit them physically as well as productively. The pathfinder also focused on the financial benefits that could be accrued from the deployment of these devices and concluded that there are benefits for Hampshire County Council utilising these extensively moving forward. This programme will support that ambition, support service users, carers, providers and the County Council as a whole.

REQUIRED CORPORATE AND LEGAL INFORMATION:

Links to the Strategic Plan

Hampshire maintains strong and sustainable economic growth and prosperity:	no
People in Hampshire live safe, healthy and independent lives:	Yes
People in Hampshire enjoy a rich and diverse environment:	no
People in Hampshire enjoy being part of strong, inclusive communities:	no

Section 100 D - Local Government Act 1972 - background documents

The following documents discuss facts or matters on which this report, or an important part of it, is based and have been relied upon to a material extent in the preparation of this report. (NB: the list excludes published works and any documents which disclose exempt or confidential information as defined in the Act.)

Document

Location

None

EQUALITIES IMPACT ASSESSMENT:

1. Equality Duty

The County Council has a duty under Section 149 of the Equality Act 2010 ('the Act') to have due regard in the exercise of its functions to the need to:

- Eliminate discrimination, harassment and victimisation and any other conduct prohibited by or under the Act with regard to the protected characteristics as set out in section 4 of the Act (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation);
- Advance equality of opportunity between persons who share a relevant protected characteristic within section 149(7) of the Act (age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation) and those who do not share it;
- Foster good relations between persons who share a relevant protected characteristic within section 149(7) of the Act (see above) and persons who do not share it.

1.1 Due regard in this context involves having due regard in particular to:

- The need to remove or minimise disadvantages suffered by persons sharing a relevant protected characteristic that are connected to that characteristic;
- Take steps to meet the needs of persons sharing a relevant protected characteristic that are different from the needs of persons who do not share it;
- Encourage persons sharing a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.

2. Equalities Impact Assessment:

Description of current service/policy

The introduction of 'cobot enhanced care' across Hampshire represents an opportunity to transform the way care is delivered to Older Adults in the community, by adjusting the level of support service users require based on an assessment of:

Individual person's needs

Environment

Equipment

Technology e.g. cobots

Innovative new cobot technology will be deployed to enable care workers to deliver more single handed care, freeing up additional care workers to provide care to other vulnerable adults.

Geographical impact: All Hampshire

Description of proposed change

The overall aim for cobot enhanced care is to optimise independence and confidence for both care giver and receiver through use of cobot technology, specialist equipment and training that enables personalised packages of care to be commissioned and delivered safely, effectively and consistently with fewer care workers. Enabling more single handed care delivery improves capacity for care providers to address the demand for care, making the care workforce more resilient for the future. By working more independently, care workers build and sustain more rewarding relationships with those they care for. □ They will have increased flexibility and hours freed up and reduced infection control risk.

Impacts of the proposed change

This impact assessment covers HCC Staff (and partners)

Engagement and consultation

Has engagement or consultation been carried out? Yes

Over 35 care workers were engaged as part of the original HCC cobot pathfinder, 18 of those wore the cobot to deliver care over a 6-8 week period and fed back on their experiences. The majority reported that it made care delivery easier: it provided physical support around the lower back, reducing aches and fatigue; improved manual handling skills; enhanced their ability to use equipment; increased their confidence; and enabled them to deliver more care independently. As part of the cobot Enhanced Care Programme, care workers will be engaged to contribute to the co-design of the new model of care and will have the opportunity to take part in a comprehensive training and development programme

Statutory considerations Impact Mitigation

Age: Positive

The cobot provides physical support around the lower back of the wearer when lifting, moving or handling objects or people. In the short term care workers feel less fatigued, in the long term they avoid injury and hopefully stay in the profession □ for longer.

A wide range of care workers will be invited to wear cobots to enhance their care delivery, but ultimately, they will have a choice over whether they want to wear cobots.

Disability: Neutral

Sexual orientation: Neutral

Race: Neutral

Religion and belief: Neutral

Gender reassignment: Neutral

Gender: Positive

The cobot originally used in the pathfinder was manufactured for one size and tended to fit more female care workers than male care workers. As part of the specification moving forward, the cobot supplier must be able to manufacture and supply cobots in a range of sizes.

Marriage and civil partnership: Neutral

Pregnancy and maternity: Medium

The cobot is not suitable for pregnant care workers and therefore they will not be expected to wear a cobot to deliver care whilst pregnant. If a care worker is pregnant and unable to wear the cobot to deliver care to a service user that is assessed as benefitting from a cobot, the care provider will support the care worker to deliver care to other vulnerable service users who do not require a cobot to have their care delivered.

Other policy considerations Impact Mitigation

Poverty: Neutral

Rurality: Neutral

Any other information

The introduction of innovative physical assistive technology, such as Cobots into care delivery is aimed to benefit care workers of all different ages, genders and ethnic backgrounds, allowing them to deliver care more effectively while also protecting them. The technology needs to be available in a range of sizes to ensure that many different care workers can benefit from this type of technology in care delivery.

The deployment of Cobots will be focused in domiciliary care in the community across Hampshire and is therefore likely to impact external care providers of domiciliary care.