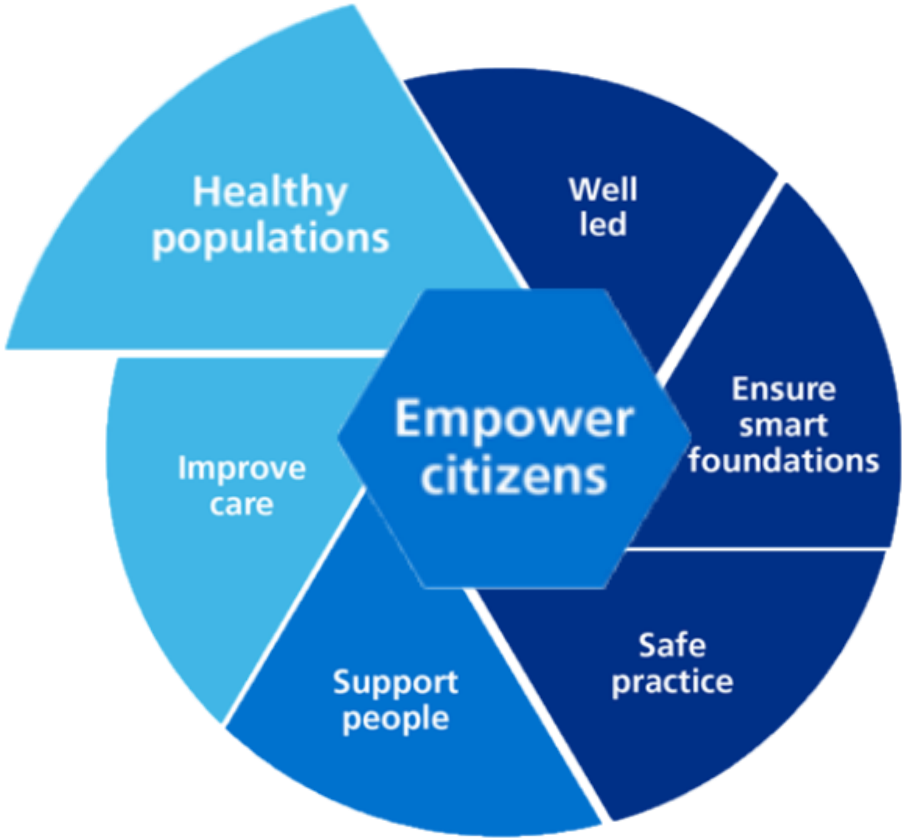
Delivering value with Digital Health care

Working together in using data and digital health to influence decision making and design in change to empower people and improve health outcomes for best possible value.

Heather Case
Head of Dorset intelligence & insight Service

&

Crystal Dennis
Interim Operational Lead for Digital Access to Services @Home



Our Dorset

Our Dorset DIGITAL

ENABLING TECHNOLOGIES

Getting the right infrastructure baseline to support our future development

DATA AND INTELLIGENCE

Transforming the way data and analytics are used across the System, by using a population health management approach, to support the design and planning of health and care services including where there are health inequalities

APPLICATION PORTFOLIO OPTIMISATION

Supporting the delivery of safe joined up, seamless care through sharing the right information at the right time

DIGITAL ACCESS TO SERVICES AT HOME

Working with commissioning and clinical teams to support Dorset citizens to empower self-care and enable them to confidently manage their health, wellbeing and long-term conditions

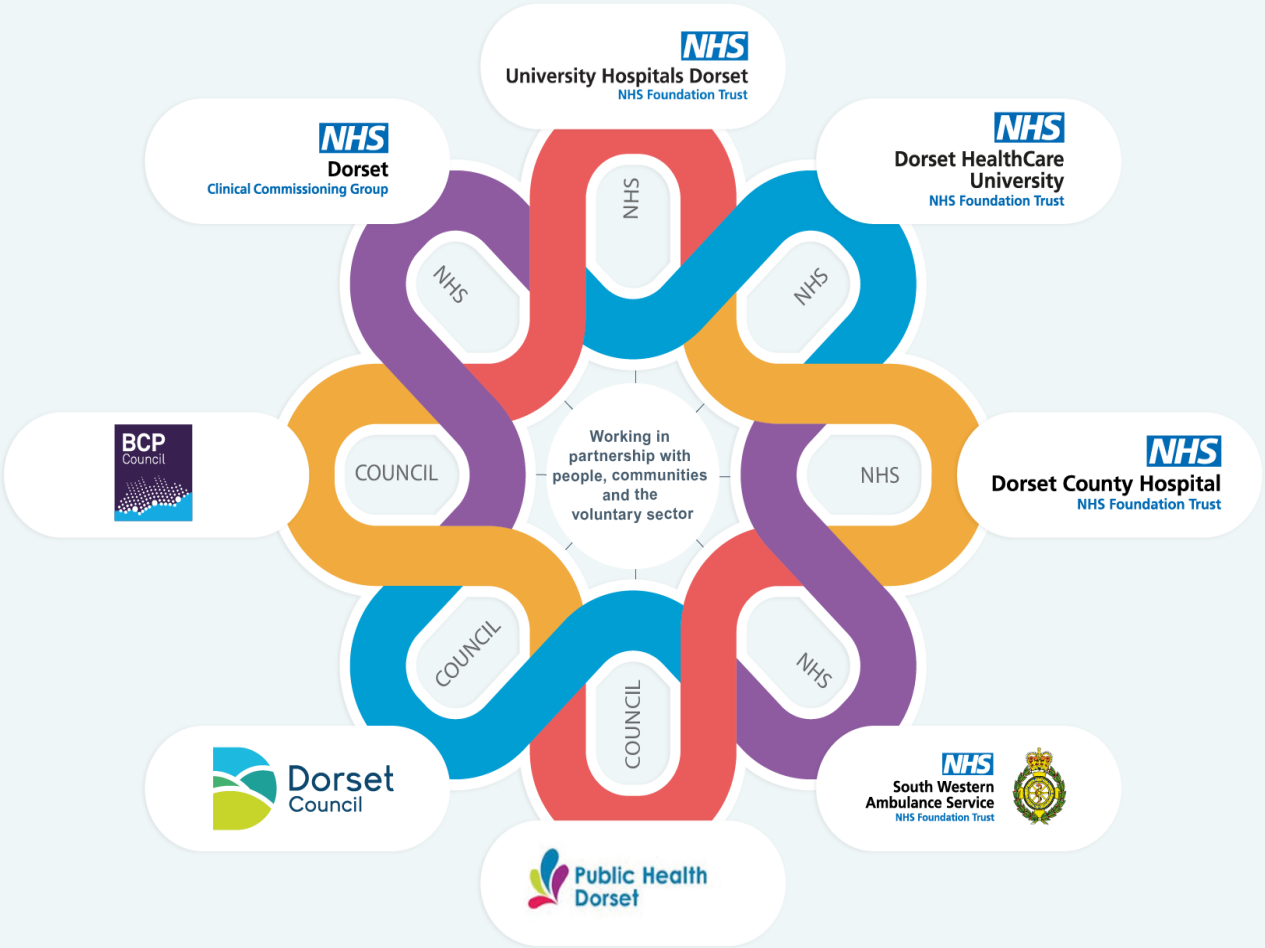
DIGITAL SKILLS

Developing the skills and understanding within the workforce to develop and deliver the digital services and embed digital change in our health and care services and develop champions and volunteers to train the public in using digital health technologies

RESEARCH, INNOVATION & PARTNERSHIPS

Inspiring and enabling research and embedding digital innovations whilst working with a range of partners including regional/ national/ international government departments, academia, research and innovation organisations and industry

Dorset Integrated Care System and Partners



&

NHS England

DORSET & WILTSHIRE FIRE AND RESCUE

Dorset Police

Microsoft

acg JOHNS HOPKINS

Dorset Intelligence & Insight Service (DiiS)

A collaborative service delivering live, linked health and social care data across Dorset.

Aim: is to make health and social care data open, easy to access, and available to create actionable insights

Use: supporting data-led service improvement, planning and decision making at a system and organisational level – and more recently during Dorset's COVID-19 response.

Digital Access to Services @Home (D@SH)

A collaborative service delivering MedTech regulated software with or without medical devices. Using clinical safety as the framework for design with appropriate data flows used for decisions at point of care and secondary use for behavioural insights in adoption and spread.

Aim: A consistent and coordinated offer with good user experience in empowering the digitally enabled and health literate / activated population with tools for supported self management. To accelerate access to services from home for actionable insights.

Use: enabling digital hybrid pathways to manage a higher demand with a different part of the ICS workforce.

18
primary care networks

77
GP practices

816,000
registered population

Awareness
What is already available?
How to bring the technologies together for outcomes
How to horizon scan effectively

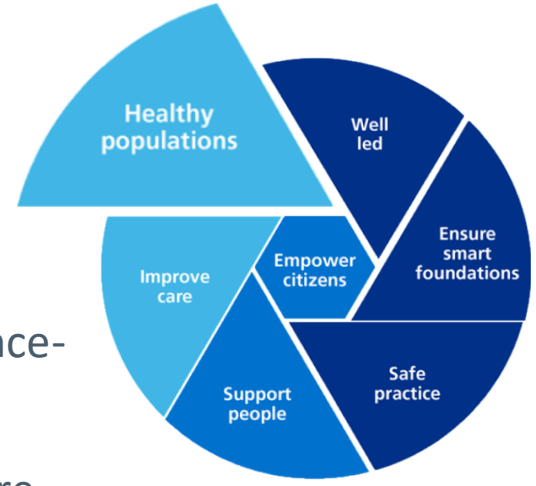
Accessibility
How to access technologies / digital platforms
How to access support and build digital knowledge & capability

Trust
Help and knowledge to build trust in the new digital ways of working and how they are being coordinated

Coordination
Support by a central teams to clarify regulatory landscape and the appropriate governance foundation for delivery

Our Dorset
DIGITAL

Healthy Populations



How DiiS supports PHM

The DiiS is being used every day by health and care professionals across Dorset to make evidence-based decisions to improve the health and wellbeing of our population.

- Tool at the forefront of Dorset's COVID-19 analytical response linking data from primary care, acute and community providers on a near real time basis
- Case finding / Targeting for individuals or cohorts (including secure re-identification of patients or service users to those who manage their care)
- Population Health Management: the ability to group by medical, mental health, demographic and socio-economic markers to identify points of earlier intervention in the pathway
- Provision of wider population-based insights to enable the use of social prescribing

How DiiS supports PHM

Cross cohort considerations for further tailoring of care offer

- English not first language
- Digital literacy, access
- Key worker?
- Caring responsibilities, who? How?
- Crowded or poor quality housing
- Access to outdoor space

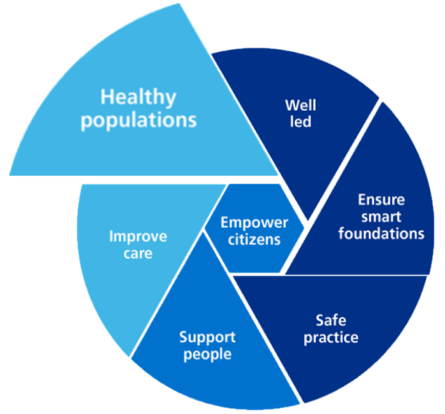
Covid Care Models matrix	No specific Covid risks	Single high risk (local)	Multiple High Risk (local)	Very High Risk/Shielding (National)
All / no specific vulnerabilities	• Whole population messaging on social distancing, health and well-being support and exercise • Maintain social distancing • Social Prescribing to Help and Kindness website for pan-Dorset support directory.	• Practice nurse check in by phone • Holistic care planning/care plan virtual review/LTC patient APP • Sign posting to tele health options national/local for particular conditions e.g. Help Diabetes management web	• Proactive Remote monitoring of blood pressure, blood sugars, weight, drinking etc via patient APP • Virtual Group consultations for linked LT Somerset LTP patterns)	• Personalised messaging on social distancing and health management for specific groups e.g. cancer, maternity, heart failure, diabetes etc here remote on is not possible upport to address long term ue bing telephone befriending online , Livewell Dorset etc
Mental health	• National websites, apps helplines (guided by Na Covid workstream) • Leaflet drop • Town council helpline • Social Prescribing to Help and Kindness website for pan-Dorset support directory.	e check in /ellbeing worker planning in with patient (and carer where relevant) • Health champion virtual groups • Social prescribing signposting to Dorset MIND for online group support. and access to The Vale First Contact MH practitioner., Steps to Wellbeing.	• Clinician for initial contact proactive case management /MH virtual review • Holistic MDT care planning in partnership with patient (and carer where relevant) • Health Champion virtual support eg. Mindful Café online for dementia.. • Social Prescribing – referral to The Vale MH practitioner., Steps to Wellbeing.	• Proactive support offer phone call • virtual MH review • town council helpline • Telephone b • Local author • Social Prescr The Vale First Steps to Well prescription
Social vulnerability	• Leaflet drop • Town council helpline • Social prescribing wellness call from Help & Care or local SP practitioner. Social Prescribing to Help and Kindness website for pan-Dorset support directory.	• Practice nurse check in • Care coordinator assigned • Holistic care planning in partnership with patient (and carer where relevant) • Practice Nurse for initial contact, then care coordinator with MDT • Social prescribing support signposting to Livewell Dorset/Age Concern	• Clinician for initial contact proactive case management • Holistic MDT care planning in partnership with patient (and carer where relevant) • LA team to support access and training for remote tech from govt scheme. • Health champion peer support . For LTC/Self management.	• Proactive support offer phone call • town council helpline • Telephone befriending • Local authority support • Social Prescribing to self management service offer, signposting to community volunteer support.
Social vulnerability + mental health	• Social prescriber assigned to conduct Wellness Call': • check in, social and practical prescribing including food bank access , town council helpline citizens advice, and broad RVS support • Social Prescribing to Help and Kindness website for pan-Dorset support directory.	• Practice nurse check in • Health and wellbeing worker assigned • Holistic care planning in partnership with patient (and carer where relevant) • Practice Nurse for initial contact, then health and wellbeing worker with MDT - • Social prescribing support -care co-ordinator appointed, coordinated personal care plan	• Clinician for initial contact, proactive case management • Holistic MDT care planning in partnership with patient (and carer wi • LA team to support a remote tech from go • Health champion virt	• Proactive support offer phone call • town council helpline • Telephone befriending • Local authority support • Social prescribing - personalised care plan agreed and implemented, offer virtual peer support online or telephone., link to volunteer support.
Increased risk of serious illness with COVID-19 Diagnosed/suspected Male/age/obesity/dementia etc	• Raise awareness via social media etc regarding risk factors for illness • Social Prescribing to Help and Kindness website for pan-Dorset support directory.	• HCA proactive approach • Monitoring via patient APP and pulse oximetry • Social prescribing offer such as LWD smoking cessation support., weight management support for obesity	• Clinician lead proact and monitoring • Monitoring via patient APP and pulse oximetry using virtual ward approach • Social prescribing offer such as LWD smoking cessation support., weight management support for obesity	• Monitoring via patient APP pulse oximetry virtual ward approach • Daily contact with clinician virtually • Social prescribing offer - LWD smoking cessation support., weight management support for obesity reduction , offer of LWD behaviour change coaches ..

Social prescriber resource targeted to where most needed

Making use of community based assets

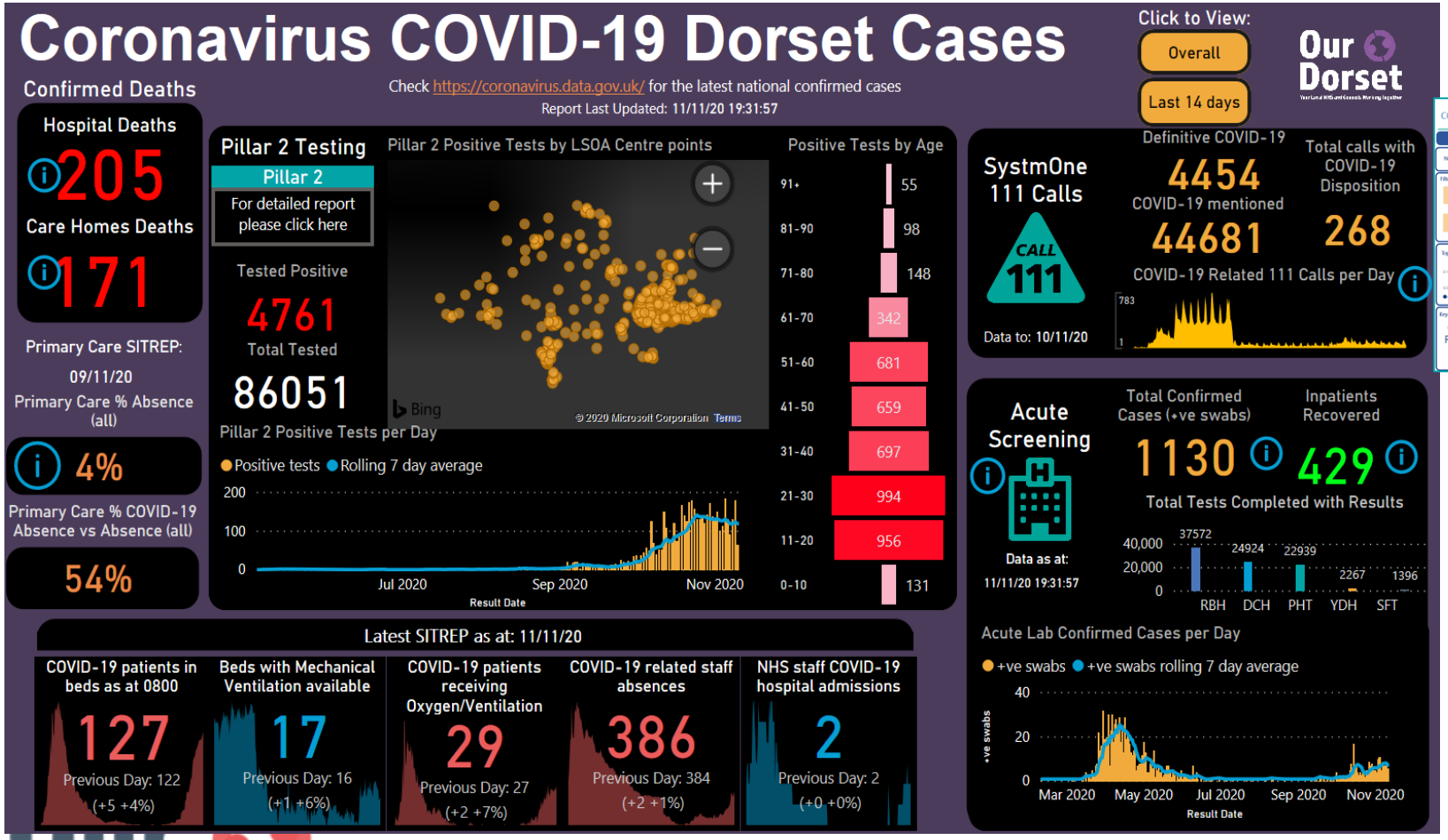
Cross provider approach to health and social care support offer

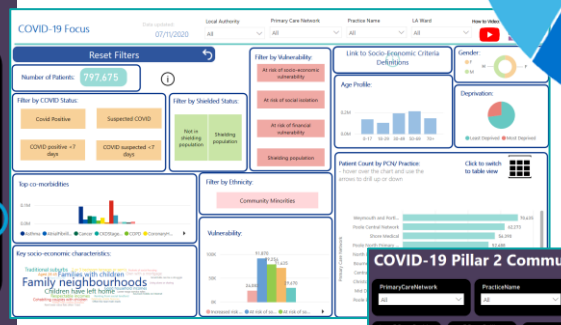
Digital technology working alongside more traditional delivery

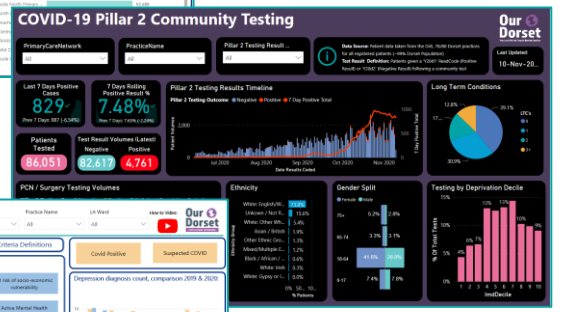


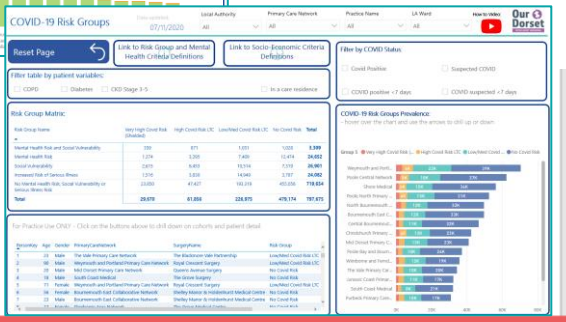
Healthy Populations

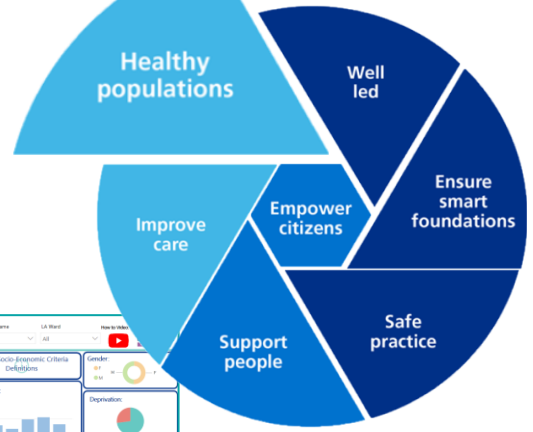
How DiiS supports the COVID-19 response







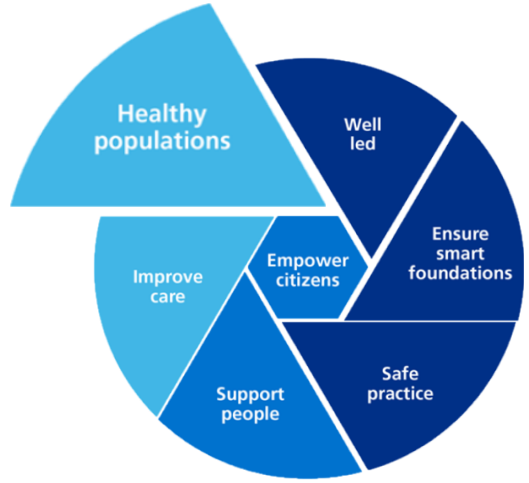




"Perfect. The COVID insights are really helpful… to identify groups… and then identify those individual patients."

Our Dorset DIGITAL

Healthy Populations – High Intensity Users



Primary Care

Click icon to open filter pane

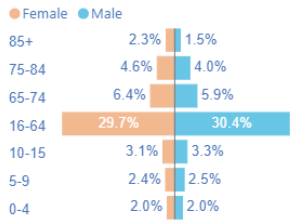
Reset All Selections

Our Dorset

Data updated to:
30 November 2021

Total Appointments (last 12 Mths)	Patients Attending (Last 12 Mths)	Did Not Attend (DNA) Rate
4.4M	610.5K (74.8 %)	2.6% (114K)

Age & Gender profile

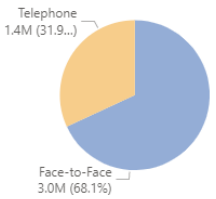


Primary care attendance (Last 12 months)

Primary Care Frequency	Patient Count	% Patients	Appt Volume	% Appts	DNA Rate
0	205,695	25.2%			
1-4	293,059	35.9%	674,631	15.6%	3.0%
5-9	173,232	21.2%	1,154,114	26.8%	2.7%
10-19	108,510	13.3%	1,437,331	33.3%	2.5%
20+	35,678	4.4%	1,045,537	24.2%	2.4%
Total	**816,174**	**100.0%**	**4,311,613**	**100.0%**	**2.6%**

Long Term Conditions

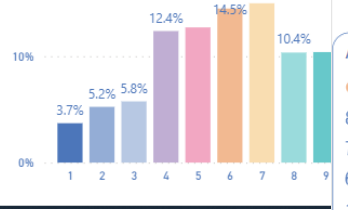
Appointment types



DNA breakdown

DNA Frequency	Patient Count	DNA Volume
0	597,742	
1-2	78,395	91,482
3-4	4,568	14,883
5+	1,021	6,664
Total	**681,726**	**113,029**

Patient % by Deprivation (1= Most Deprive



ED / MIU

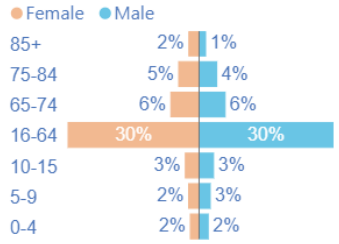
Click icon to open filter pane

Reset All Selections

Our Dorset

Total ED/MIU Visits (last 12 Mths)	ED Attendances (last 12 Mths)	MIU Attendances (Last 12 Mths)	Patients Attending (Last 12 Mths)	Emergency Admissions (last 12 Mths)
200.6K	165.3K (82.4 %)	35.2K (17.6 %)	130.9K (16 %)	72.6K

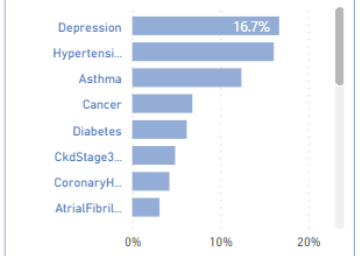
Age profile



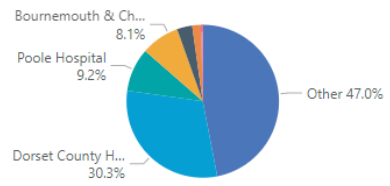
ED / MIU attendance (Last 12 months)

Attendance Frequency	Patient Count	% Patients	Attendance Volumes	% Attendance	Emergency Admissions
0	685,240	84.0%	0	0.00%	10,663
1-4	127,823	15.7%	178,048	88.77%	53,792
5-9	2,685	0.3%	15,947	7.95%	6,061
10+	426	0.1%	6,577	3.28%	2,040
Total	**816,174**	**100.0%**	**200,572**	**100.00%**	**72,556**

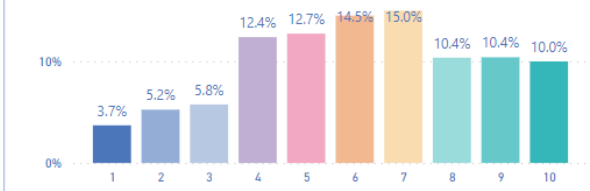
Long Term Conditions



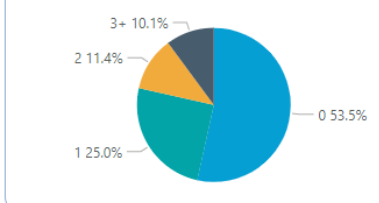
Locations



Patient % by Deprivation (1= Most Deprived)



Long Term Condition Count



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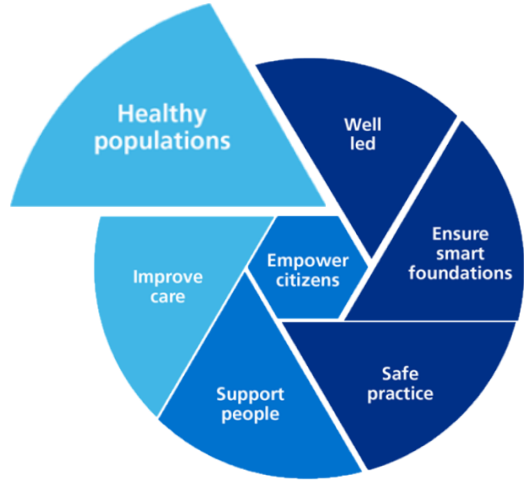
NB: Images blurred for data protection

Healthy Populations



Focussing on Frailty

Frailty Metrics

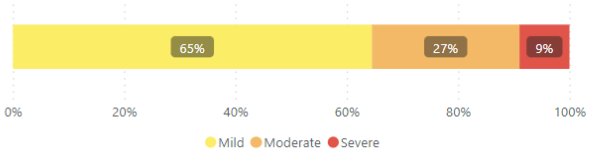
Click icon to open filter pane

Last Updated: 18 September 2021

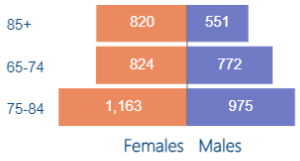
Our Dorset

% Total Patient Population 'Not Frail':	80.6%
% Total Patient Population 'Frail':	0.8%
% with no eFrailty Score	2.6%

eFrailty Index Grouping:



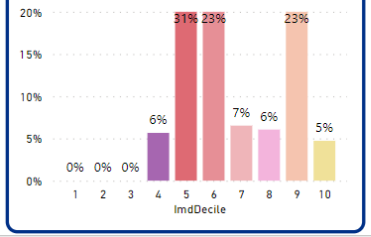
Age and Gender:



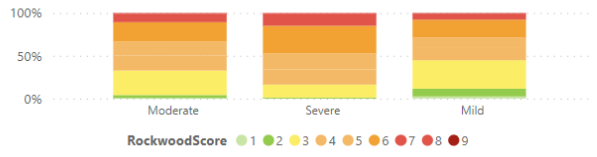
Main Frailty Care Processes:

98.4% No Care Plan	0.5% Has a Carer	1.0% At Risk of Falls	5.2% Medication Review
1.2% Care Plan < 18mths	0.2% In a Care Home	0.3% Fallen < 12mths	4.6% Flu Vaccination

Deprivation Deciles (1 is most deprived):



Rockwood versus eFrailty:



Reset Filters

Number of Frailty Population: 6,604

eFrailty and Co-morbidities:

Frailty Co-morbidities

Click icon to open filter pane

Last Updated: 18 September 2021

Our Dorset

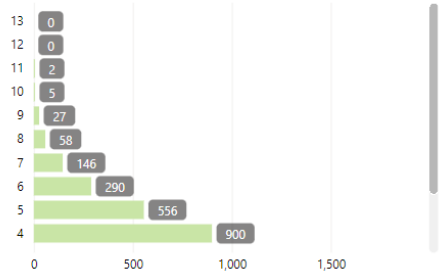
Number of Patients - Frailty Group: 6,604

Reset Filters

Filter by eFrailty Status: Mild | Moderate | Severe

Too many patients to Re-Identify, apply further filters

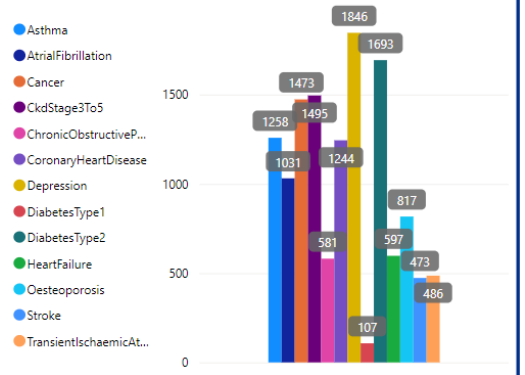
Number of Frailty Patients and Long-Term Conditions:



Filter by Complexity:

Asthma	Atrial Fibrillation
Cancer	CKD Stage 3 to 5
COPD	Coronary Heart Disease
Depression	Diabetes
Heart Failure	Oesteoporosis
Stroke	Transient Ischaemic Attack

Frailty and Co-morbidities:

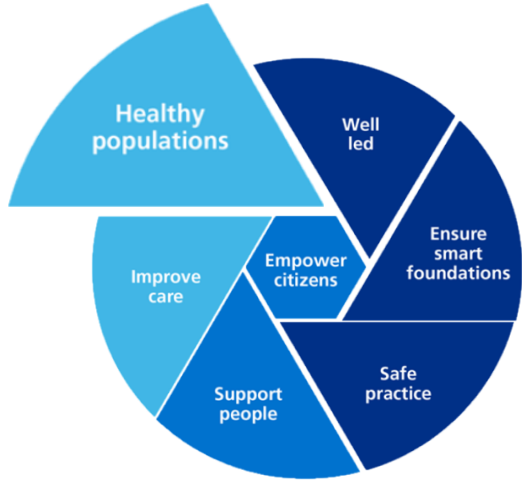


For Practice Use ONLY - Click on the table above to drill down on cohorts and patient detail:

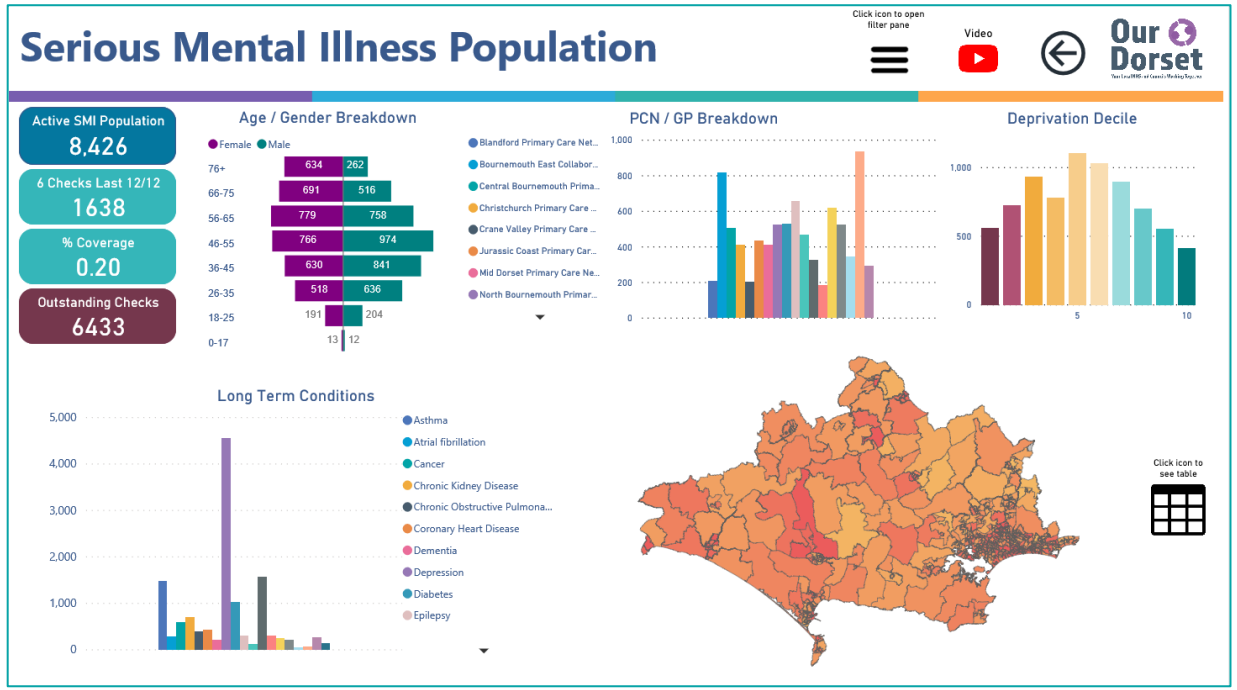
Person Key	Age	Gender	Surgery Name	eFrailty Scores	eFrailty	# LTC's	Asthma	Atrial Fibrillation	Cancer	CKD Stage 3-5	Coronary Heart Disease	Dementia	Depression	Diabetes	Epilepsy	Heart Failure	Hyperte
179	80	Male	The Blackmore Vale Partnership	0.22	Mild	2	0	0	0	0	0	0	0	1	0	0	
274	88	Female	The Blackmore Vale Partnership	0.31	Moderate	4	0	0	1	0	1	0	0	1	0	0	
349	54	Male	The Blackmore Vale Partnership	0.14	Mild	2	1	0	0	0	0	0	0	0	0	0	

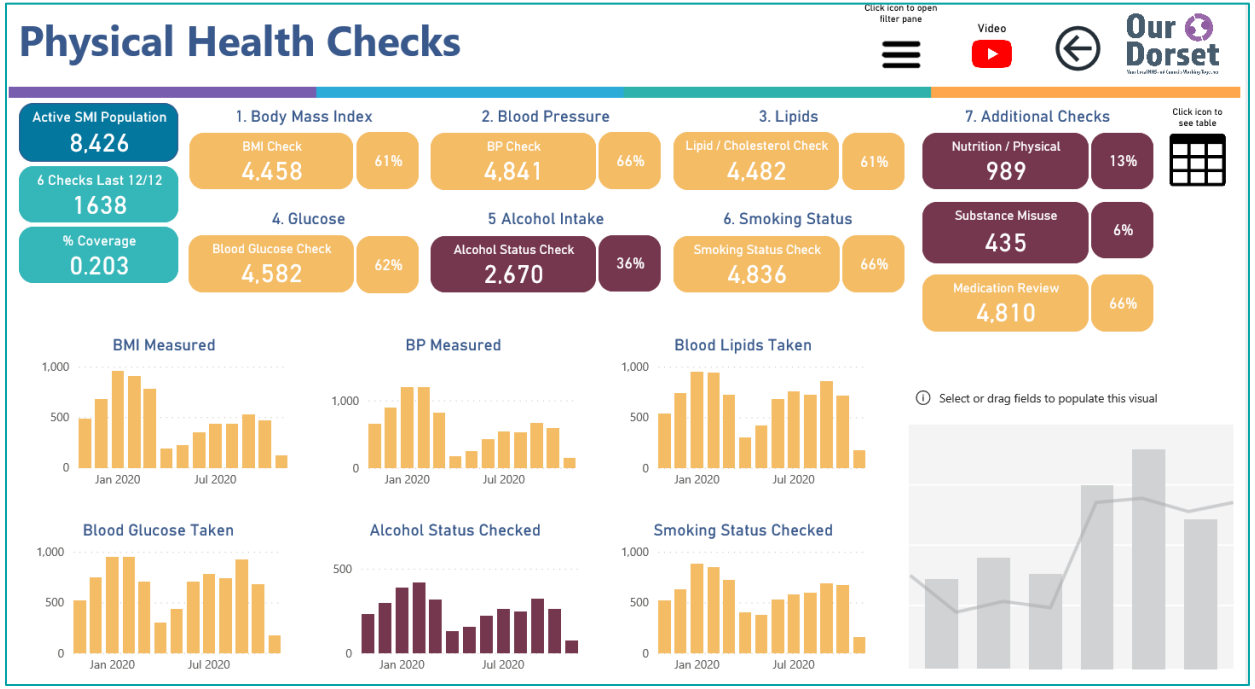
Our Dorset DIGITAL

Healthy Populations



How DiiS supports mental health

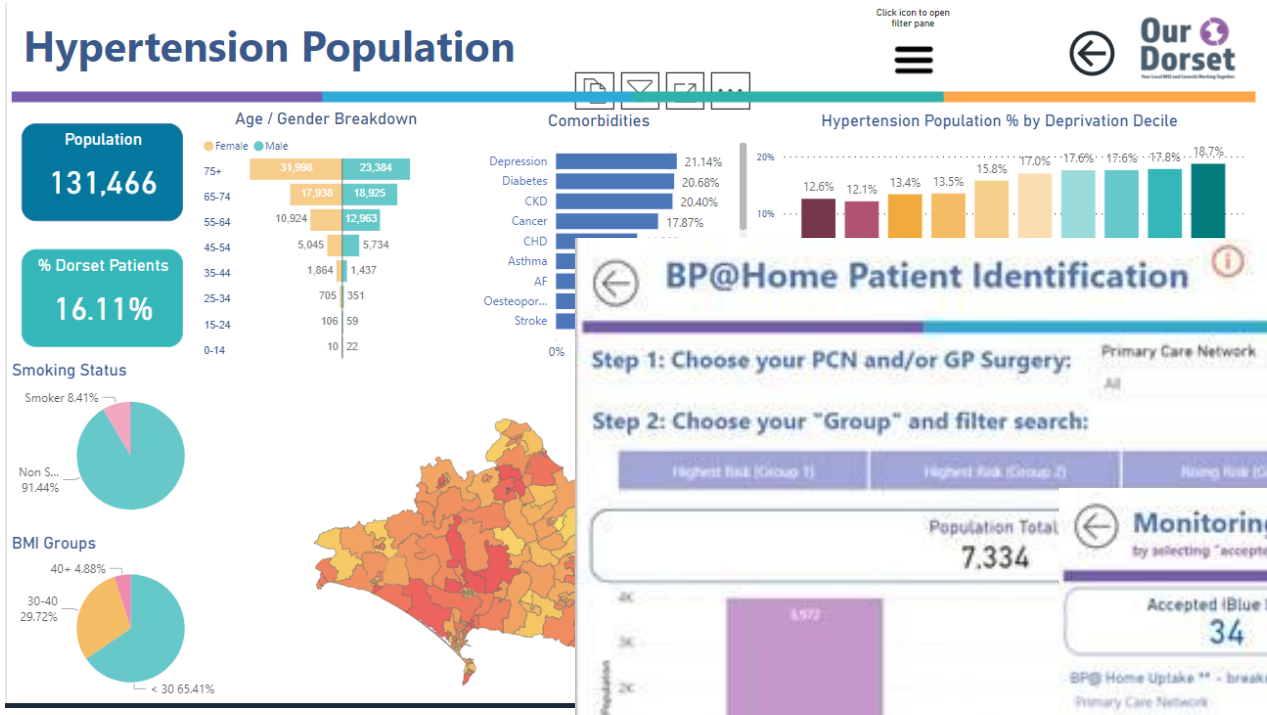


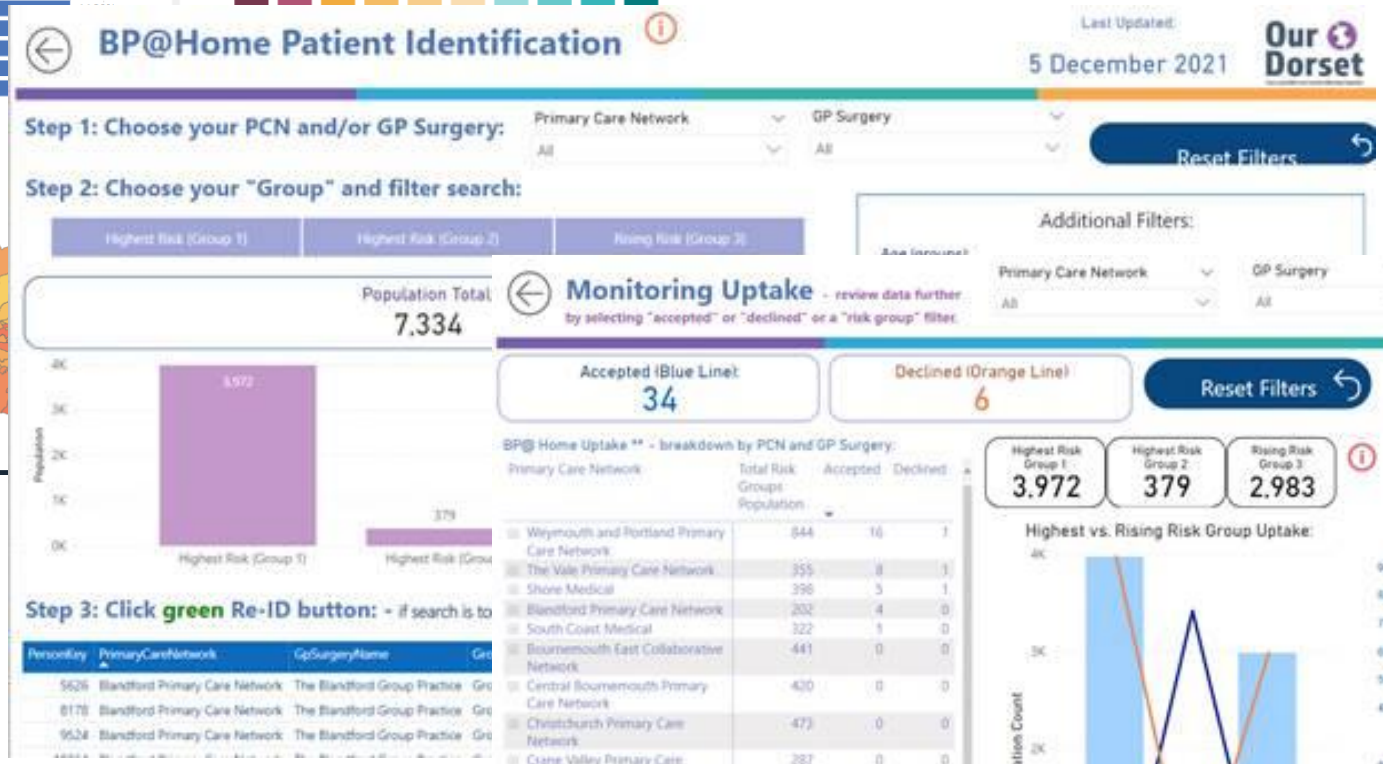


> "Exploration of the link between physical health with mental health problem and how a care plan can help manage these two more effectively and prevent mental health
> deterioration then causing deterioration in physical health/diabetes and vice versa."
>
> – Local GP

Our Dorset DIGITAL

Healthy Populations





Our Dorset
DIGITAL

myCOPD

Helping you achieve a healthy and independent lifestyle through self-management.

- ✓ Expert education on all aspects of your COPD care
- ✓ Functions that enable you to monitor your COPD
- ✓ Videos on how to get the best from your inhaler
- ✓ Online pulmonary rehabilitation class

Now available on the Apple, Google Play App Store and NHS Apps Library

myHeart

Helping you achieve a healthy and independent lifestyle.

- ✓ Expert education on all aspects of your heart care
- ✓ Functions that enable you to monitor your heart
- ✓ Functions that enable you to monitor and manage your risk factors
- ✓ Online exercise program

Now available on the Apple, Google Play App Store and NHS Apps Library

myAsthma

Helping you achieve a healthy and independent lifestyle.

- ✓ Expert education on all aspects of your Asthma care
- ✓ Functions that enable you to monitor your Asthma
- ✓ Videos on how to get the best from your inhaler
- ✓ Localised pollution, pollen and weather forecasting

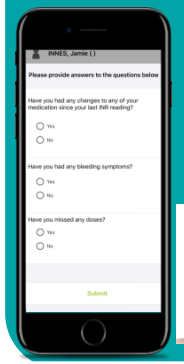
Now available on the Apple, Google Play App Store and NHS Apps Library

Maternity matters

:Empowered self care / support plan:

- √ Antenatal online
- √ Postnatal care
- √ Birthing plan
- √ online advice and information
- √ appointment visualisation
- √ notifications

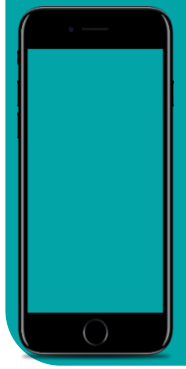
Pulse oximetry



Empowered self care/rehabilitation

- √ online consultation
- √ Signposting
- √ goal setting & gamification
- √ behaviour change techniques
- √ online courses
- √ health monitoring

BP@Home



Empowered self care/rehabilitation

- √ online consultation
- √ Signposting
- √ goal setting & gamification
- √ behaviour change techniques
- √ online courses
- √ health monitoring

ACR

Empowered self care/rehabilitation

- √ online consultation
- √ Signposting
- √ goal setting & gamification
- √ behaviour change techniques
- √ online courses
- √ health monitoring

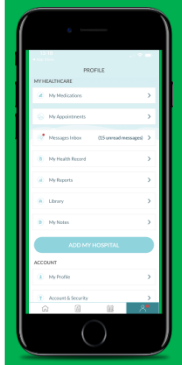
myDiabetes

Helping you achieve a healthy and independent lifestyle.

- ✓ Expert education on all aspects of your diabetes care
- ✓ Functions that enable you to monitor your diabetes
- ✓ Help to reduce your risk of serious long-term complications
- ✓ Exercise program

Now available on the Apple, Google Play App Store and NHS Apps Library

My Arthritis



Empowered self care:

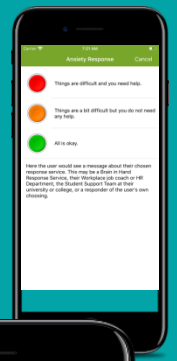
- √ symptom tracking
- √ advice and guidance with an NRAS library
- √ goal setting
- √ trend analysis
- √ online courses
- √ medication notifications
- √ two way messaging
- √ PROM collection

Quit Smoke

Empowered self care/rehabilitation

- √ online consultation
- √ Signposting
- √ goal setting & gamification
- √ behaviour change techniques
- √ online courses
- √ health monitoring

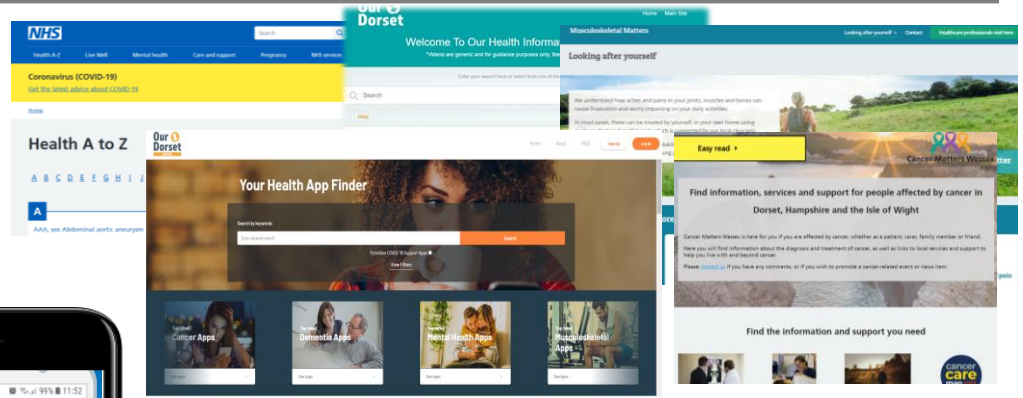
Brain in Hand



:Empowered self care / support plan:

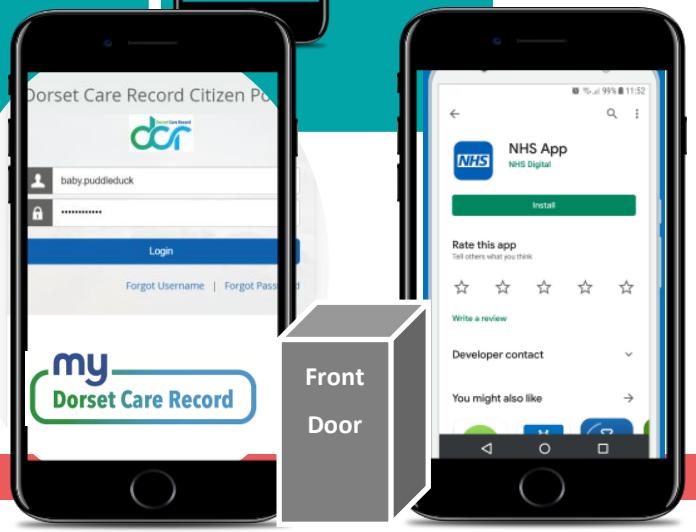
- √ Service signposting
- √ Goal setting and gamification

Screening / Diagnostics Virtual wards and remote monitoring



Digital Health Information

LTC (supported self management & online rehabilitation)



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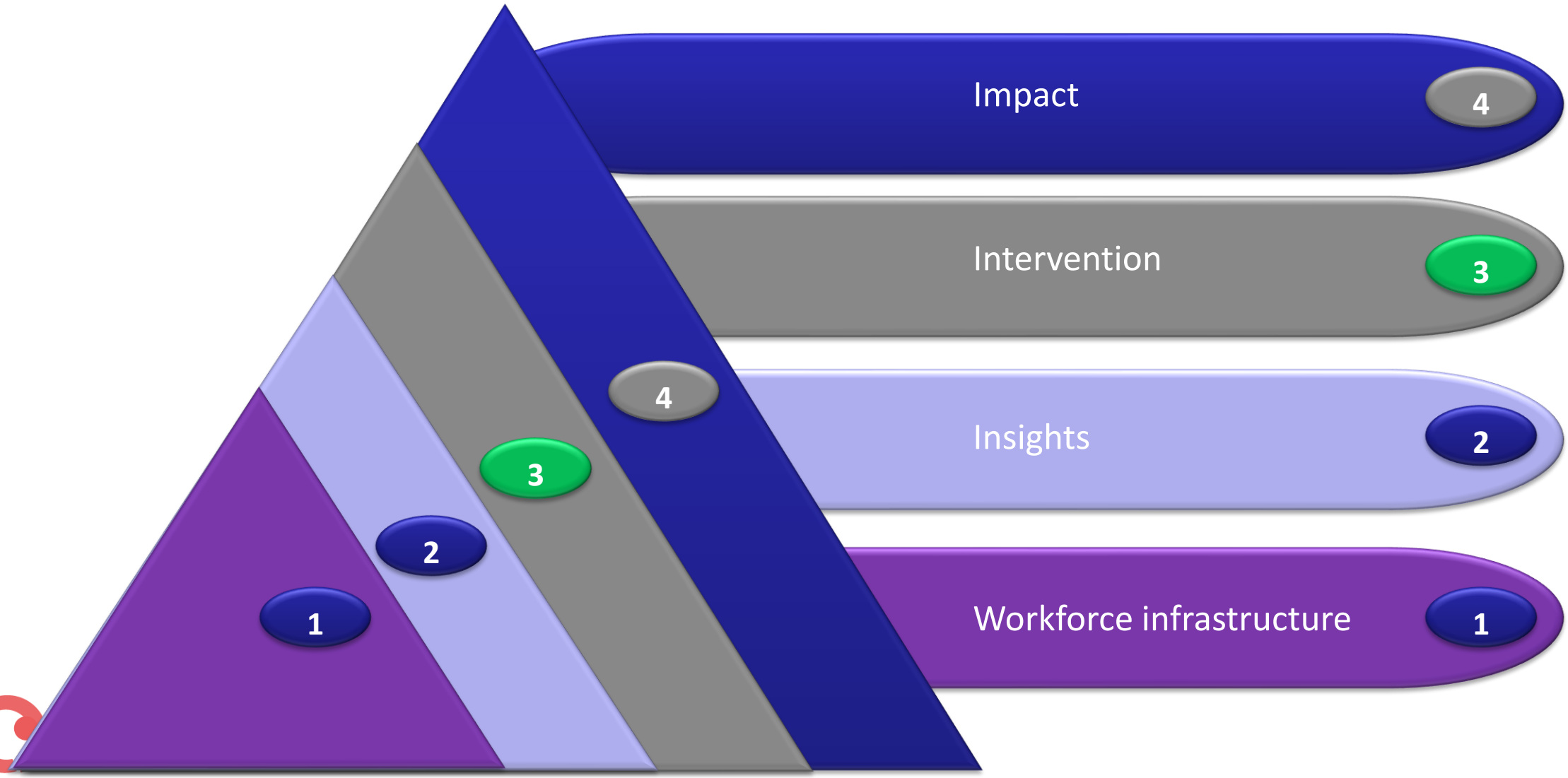
Building blocks of success using a Population Health approach...



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Building blocks of success using a Population Health approach...

Highest Risk

Recommended guide
Inclusion/targeted cohorts:
Group 1
>40 years old
NHS E/I Group A - Clinically extremely vulnerable + BP >150/90
Group 2 (BPM that can be used with AF)
NHS E/I Group B - Clinically extremely vulnerable with hx of TIA/CVE and no previous diagnosis of AF + BP >150/90 (prioritization given to BAME, >65s, socially deprived)

WITH:
Uncontrolled hypertension last BP reading as defined by >150/90

Greatest risk of hospitalisation within 12 months. clinical decision Could be controlled but at risk of hospitalisation and specialist care. Complex with perhaps multiple comorbidities

Where do these target groups reside? These are our early adopter sites.

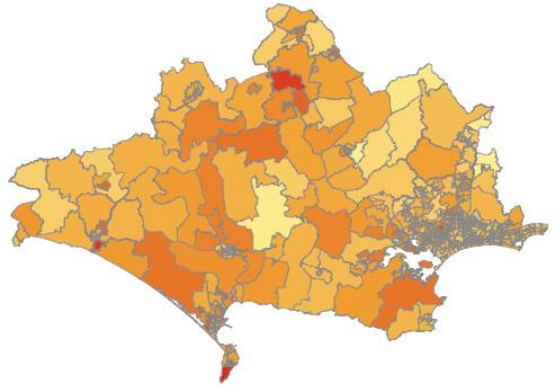
Rising Risk

Recommended guide
Inclusion:
Group 3 (risk strat according to local demographic)
>40 years old + BMI 35 + and/or CVD and/or CKD+ BP >150/90
(Note: prioritisation given to BAME, >65s, socially deprived)

Exclusion Criteria (ref to

Exclusion:
- BP <150/90
- 4 or more antihypertensives
- Diabetes (separate Diabetes workstream/pathway)
- Dementia
- Unable to consent
- Pregnancy or planning pregnancy
- Frailty score 4 or above
- AF

- NOTE: To have discussion with care home regarding inclusion and exclusion



1. South Coast medical group
2. Poole Central
3. Blackmore vale
4. Weymouth and Portland
5. Shore medical
6. The Blandford group
7. Mid Dorset
8. Jurassic Coast

Each local area can decide which group(s) they want to focus on first, according to local priorities and context.

Our Dorset
Your Local NHS and Councils Working Together

Working in partnership to strengthen implementation, and deliver quality outcomes and benefits

OMRON

Wessex Academic Health Science Network

DORSET Local Enterprise Partnership

BU Bournemouth University

EY

AstraZeneca

NAPC | National Association of Primary Care

OPTUM

Sollis

my mhealth

SHIP

NIHR | Applied Research Collaboration Oxford and Thames Valley

University of Oxford

Nuffield Department of Primary Care Health Sciences

Primary Care Clinical Trials Unit

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Insights using DiiS to take a population health approach to identify hypertensive patients

Deliver cuffs to patients to support their self management and education

Track the effect that the platform is having in usage and impact and evaluate the work

Delivering benefits to patients in Dorset

Different value propositions

Cash Release

Capacity Release

Single point of navigation = aligned comms and marketing

New model of care with improved service integration

Change of workforce utilisation clinical to non clinical

Research generation for inward investment

Better adherence to support planning

Accelerated access to services

Improved workforce maturity in digital and data literacy

Data powering population health insights

Personal Health Records

Administrative Support

Regulation Heavy

Pathway Replacement

Regulation Heavy

Integrated

Clinical / Pathway Support

Regulation Heavy

Patient portals

Data powers the population health insights for Planning / problem definition & Evaluation and impact

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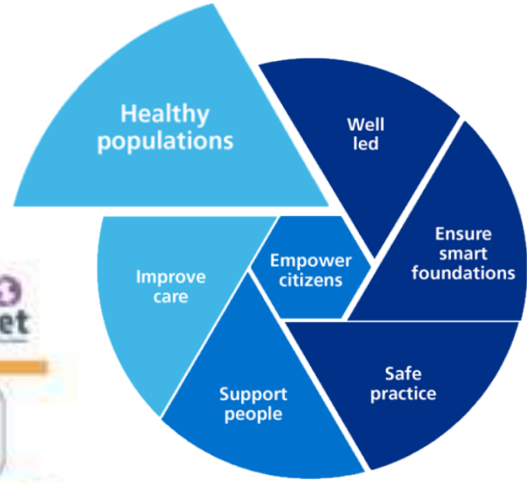
Healthy Populations



How DiiS supports digital literacy

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Financial approach

Inward investment from system both inside and outside sources e.g. LEP, ETTF, HSLI, LHCRE

Top slices from block contracts

Transformation funding e.g. Aging Well, Anticipatory care.

5% of growth funds now allocated to Digital

5% of overall system budget to be invested in digital

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Questions?

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