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Learning from deaths and Physical Health interventions

A review of findings from an analysis of inpatient deaths, September 2019-September 2022

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Analysis

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Aims and objectives

Overall aim –

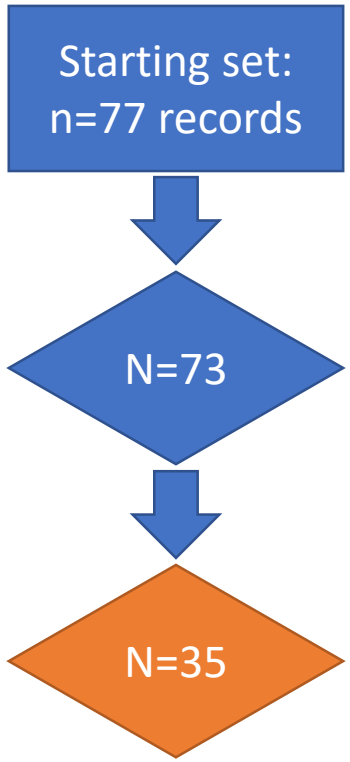
To **reduce deaths on mental health inpatient wards** due to preventable physical health causes and **improve physical health outcomes** of ELFT mental health inpatients

Objectives -

1. To assess the ***specific causes*** of deaths attributed to physical health, for the ELFT inpatient population, that occurred in the last **3 years** (from 1 September 2019 to 1 September 2022)

2. To make recommendations for prevention initiatives/interventions to improve physical health of mental health inpatients and reduce preventable physical health deaths on inpatient wards

Analysis approach



Starting extract from Datix – supplemented by data from SI reports, concise reviews, 48 hour reports etc – and input from the SI review and legal teams on definitive CoD

Exclusions at each step, and rationale for doing so:

Initial screening of records

- Duplicates removed (n=3)
- Extraneous records removed e.g. bystanders (n=1)

Detailed analysis

- Deaths where definitive CoD either not available or inquest pending (n=18)
- Deaths where the incident occurred >7 days from discharge from ELFT ward (n=10)
- Deaths where definitive CoD not relevant to analysis (e.g. suicide) (n=10)

Cause of death

- Wide variations in documented CoD linked to physical health conditions among n=35 included cases

- **Underlying CoD*** linked to:
  - Cardiovascular disease in n=15 cases (43%)
  - Type II diabetes in n=7 cases (20%)
  - Chronic respiratory disease in n=5 cases (14%)

COVID-19 was the documented CoD in n=4 cases (11%)

* This was defined as a category 1b or 2 cause on the death certificate, rather than 1a.

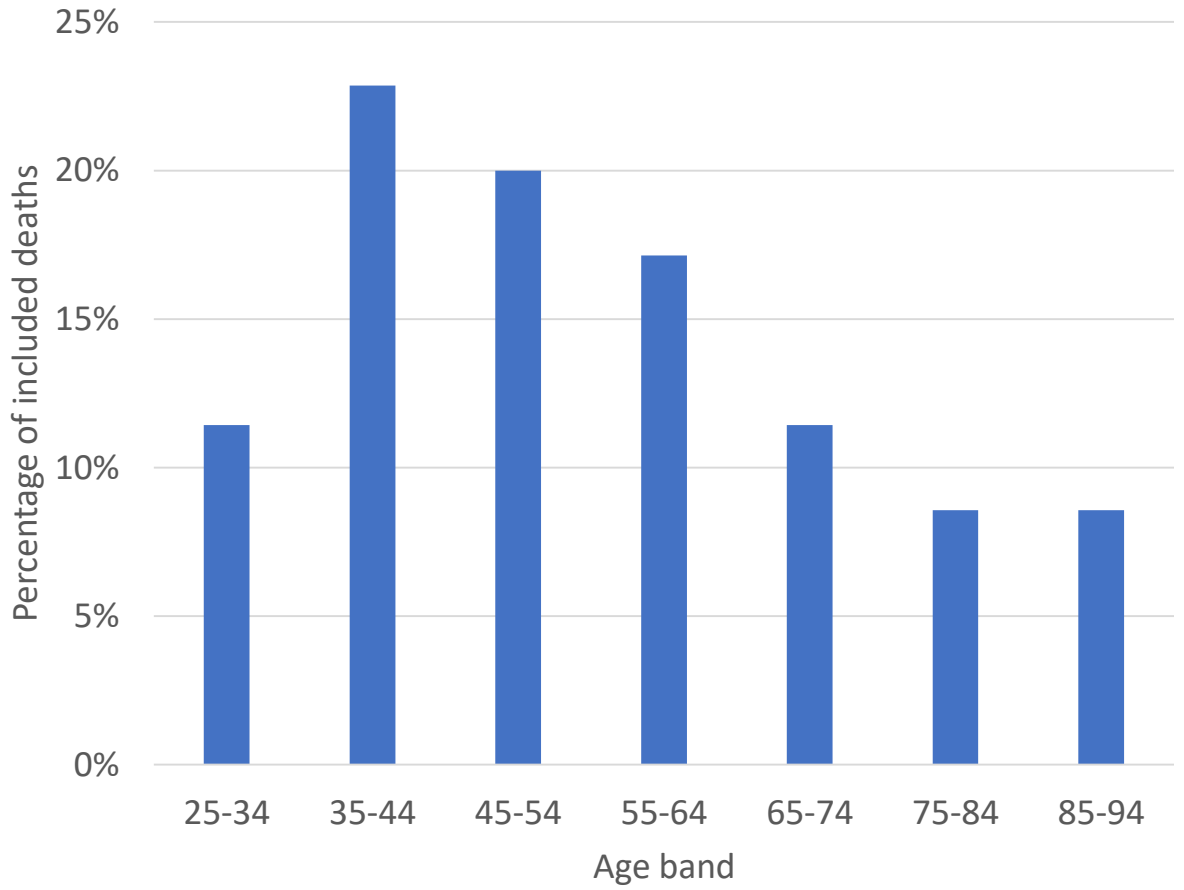
Deaths among ELFT patients: broad overview

No clear trend in deaths over time discernible

Mortality profile for ELFT inpatients is **younger than would be expected in the general population**: median age at death = 54 years

The gender profile for deaths is slightly **skewed towards males**: 54%

40% of deaths occurred among people of black or mixed and black ethnicity: likely reflecting profile of inpatient admissions overall



Co-morbidities and routine clinical care

- **Co-morbid disease in this population was common**, despite the young profile of the inpatient cohort:
  - 37% (n=13) had documented histories of cardiovascular disease
  - 34% had diabetes
  - 26% had chronic respiratory disease
  - 9% had cancer

However, investigations did not identify specific opportunities for improvement of routine care for these conditions among inpatients

Risk factors for disease

- Risk factors for physical ill-health were common:
  - 43% of patients were either current smokers or had a past history of tobacco use
  - 43% had hypertension
  - 29% were currently excess alcohol consumers or had a past history of this
  - 29% either engaged in substance misuse around the time of death or had done so in the past
- Morbid obesity was **directly identified** as a contributory factor to poor outcomes following hospital admission in n=3 cases

ELFT mortality data in national context

Based on 2018-2020 data, people with SMI are nearly **5 times more likely to die prematurely** than those who do not have an SMI:

- 4 times more likely to die early due to cardiovascular disease than those who do not have an SMI
- Just over 6.5 times more likely to die early due to respiratory disease
- 6.5 times more likely to die early due to liver disease
- Just over 2 times more likely to die early due to cancer

Risk factors such as **tobacco use** are more prevalent in people with an SMI compared to the general population:

- In 2014/15, smoking prevalence in all adults (aged 18+) was 16.4%* vs 40.5% among those with SMI

Source: Excess under 75 mortality rates in adults with serious mental illness 2018 to 2020 England, May 2022
https://files.digital.nhs.uk/CC/287C9F/SMI_Excess_mortality_2018_20.pdf Accessed 7/2/2023
https://www.gov.uk/government/publications/health-matters-smoking-and-mental-health/health-matters-smoking-and-mental-health

*this has fallen to 13.3% in 2021 (ONS 2021)

Common care issues identified

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- Among those cases for which further investigations were carried out, the two most common care issues identified (relating to physical health) were:
- **Monitoring: identified as an area for learning in n=16 (46%) of the deaths** and spanned issues including:
  - Adherence to monitoring plans
  - The frequency of observations especially for patients on enhanced monitoring
  - Readiness of availability of monitoring equipment
- **CPR and resus problems: arising in n=6 (17%) of the deaths**, and spanned issues including:
  - The timeliness/speed of initiation of CPR for patients who had collapsed on the ward
  - Staff training/competency to perform CPR (BLS vs ILS training)
  - Ease of use of resus equipment

VTE Policy:

All Patients to have a screening risk for Venous thrombosis embolism within 14 hours of admission and VTE assessment carried out as required and recorded on RIO Patient electronic template under Physical Health. https://www.nice.org.uk/guidance/qs201

Nutrition and Fluid Management policy see Intranet

Conclusions and next steps

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Inpatient deaths at ELFT occurred predominantly among younger patients, and a disproportionate (relative to the general population) number occurred among those of black or black-mixed ethnicity;

Co-morbid health conditions and risk factors for disease were common – but no causal links to inpatient care of physical conditions identified through the analysis or SI review;

This cohort likely represent the extreme end of the risk spectrum for physical ill-health among ELFT patients - opportunities for population-wide prevention likely greater among moderate risk cohort;

Next steps could include:

- Strengthened training and support for on-ward monitoring and CPR
- Strengthening primary and secondary prevention work: referrals to stop smoking service, action on healthier lifestyles (diet, physical exercise and substance misuse) as part of recovery

There is also potential for early intervention to maintain and improve the physical health of people with severe mental illness and learn from deaths and 'Serious Incidents'

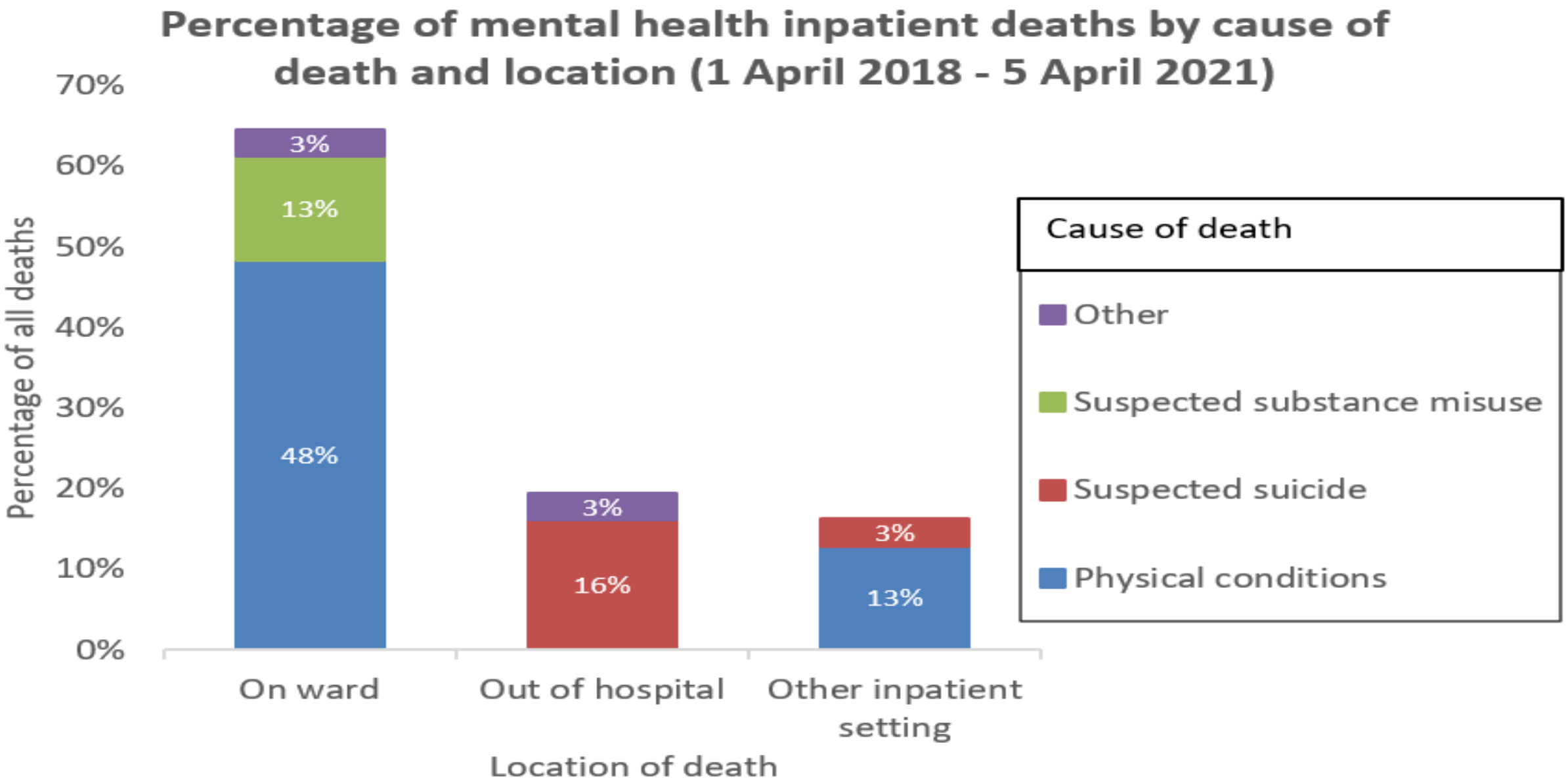
:

❖People with severe mental illness have a life expectancy up to 20 years lower than the general population

❖Research has shown that mental health conditions with the greatest increases in risk for all-cause mortality in comparison with the general population are substance misuse, anorexia nervosa, and schizophrenia

❖***Previous analysis 1st April to 5th April 21 by ELFT Public Health Team. Showed similar results as below*** ELFT Physical conditions were the commonest cause of death (61%), followed by suspected suicide (19%) and suspected substance misuse (13%).

❖65% of the deaths occurred on the mental health ward, 19% occurred out of hospital (absent, on leave or within seven days of discharge) and 16% occurred elsewhere in hospital following a transfer to an acute hospital/ward.


Percentage of mental health inpatient deaths by cause of death and location (1 April 2018 - 5 April 2021)
70%
60%
50%
40%
30%
20%
10%
0%
Percentage of all deaths
3%
13%
48%
3%
16%
3%
13%
On ward
Out of hospital
Other inpatient setting
Location of death
Cause of death
Other
Suspected substance misuse
Suspected suicide
Physical conditions

Patient and environmental factors in Mental Health

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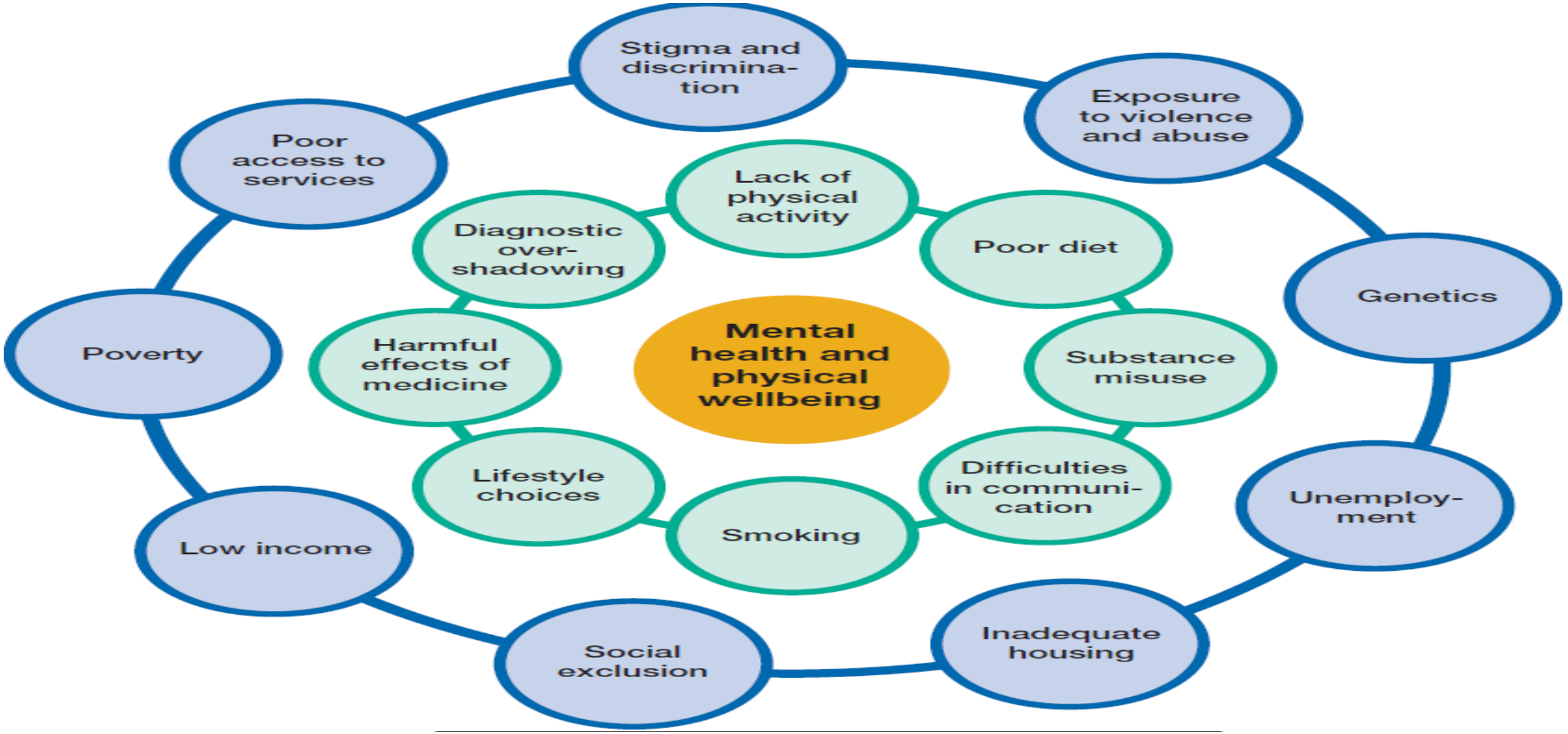
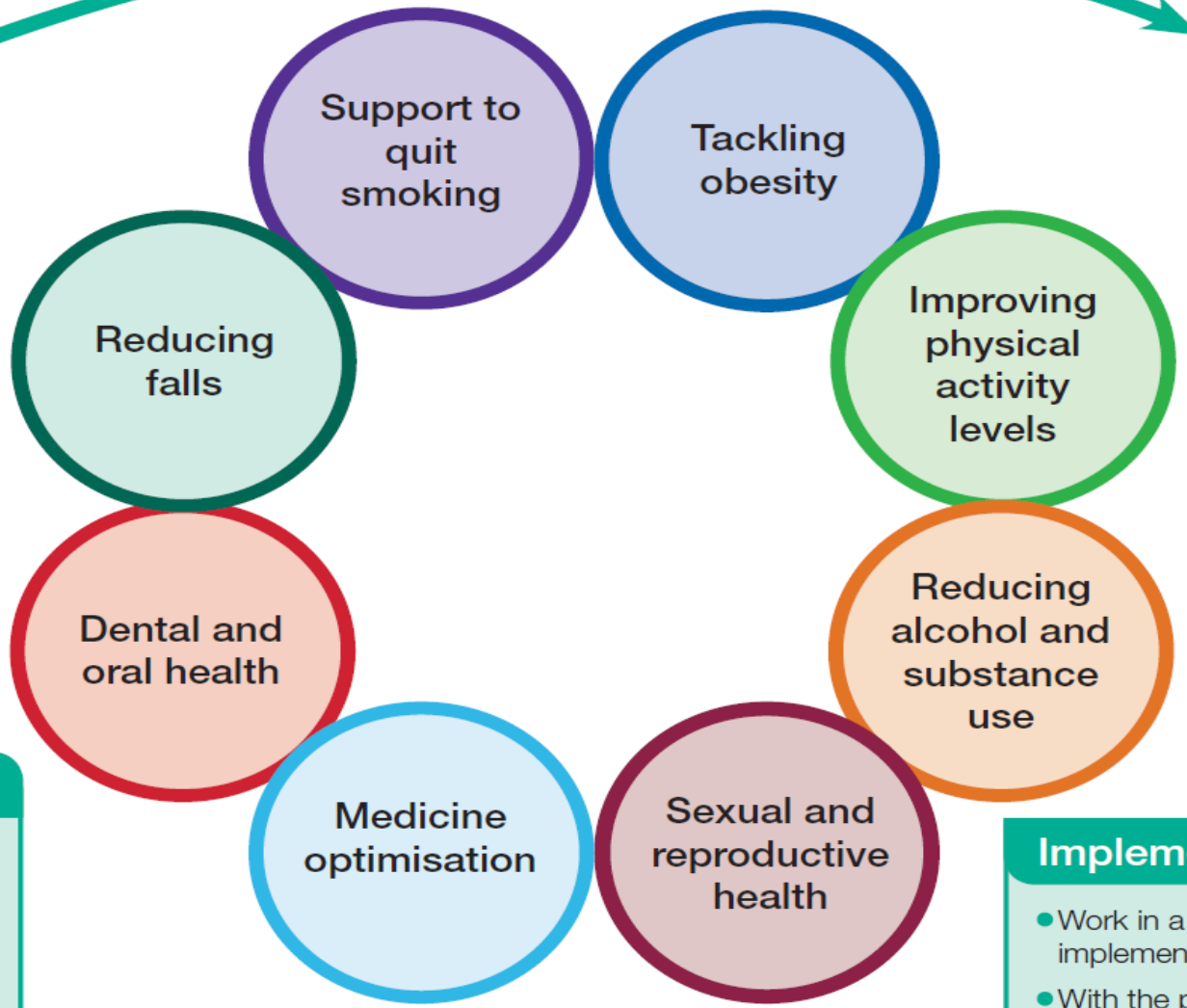


Assess

- Use a person centred approach to assess the individual's current physical health
- Listen to the person, their preferences and concerns
- Identify what is important to the person, how they live their life and what they want to change
- Acknowledge and address the individual's fears and anxieties
- Use an appropriate physical assessment tool



Plan

- Work with the individual to create a shared care plan for improving their physical health and wellbeing
- Identify key goals and aspirations, set dates and times that are realistic and manageable for achieving measurable outcomes
- Identify local health, social care and/or voluntary services that can provide particular types of support
- With the person's consent, work in partnership with other healthcare professionals to promote equal access to all appropriate healthcare
- Agree what will be in the care plan and give a copy to the individual

Implement

- Work in a person centred, integrated, holistic way to implement the plan of care
- With the person's consent, involve carers and other healthcare professionals if appropriate
- Make sure the individual receives treatment for their physical health problems
- Use the activities to achieve change outlined under each action area

Evaluate

- Monitor and review progress with the individual and refine and adjust care plans if necessary
- Discuss and record outcomes of specific actions and interventions with the individual
- Gather evidence on the impact of any changes, for example by repeating assessment tool measures
- Review priorities and action areas and negotiate with the individual to update

Lester UK Adaptation

Positive Cardiometabolic Health Resource

An **intervention framework** for **patients** with **psychosis** on **antipsychotic medication**

Smoking	Lifestyle	Body Mass Index (BMI) Weight	Blood Pressure	Glucose Regulation (Assess by fasting plasma glucose; random plasma glucose; HbA_{1c})	Blood Lipids
Current Smoker	Poor diet **AND/OR** Sedentary lifestyle	BMI ≥25 kg/m² (≥23 kg/m² if South Asian or Chinese) **AND/OR** Weight gain >5kg over 3 month period	>140 mm Hg systolic **AND/OR** >90 mm Hg diastolic	HbA_{1c} or Glucose threshold: HbA_{1c} ≥42 mmol/mol (≥6%) **AND/OR** FPG ≥5.5 mmol/l **OR** RPG ≥ 11.1 mmol/l	Total chol >6.0 mmol/l **OR** High (>20%) risk of CVD (using available risk equations e.g. QRisk) based on measurement of total chol/HDL ratio

Lifestyle advice to include diet and physical activity. **Medication review.**

Refer for investigation, diagnosis and treatment by appropriate clinician if necessary.

Brief individual intervention Consider referral to NHS Smoking cessation programme http://smokefree.nhs.uk/ Consider nicotine replacement therapy		Follow NICE guidelines for obesity http://www.nice.org.uk/CG43	Follow NICE hypertension guidelines http://publications.nice.org.uk/hypertension-cg127 Consider anti-hypertensive therapy Diet: limit salt intake	**At High Risk of Diabetes** HbA_{1c} 42-47 mmol/mol (6.0% - 6.4%) FPG 5.5 - 6.9 mmol/l i) Offer intensive structured lifestyle education programme ii) If ineffective consider metformin (see overleaf)	**Diabetes** HbA_{1c} ≥48 mmol/mol (≥6.5%) FPG ≥7.0 mmol/l RPG ≥11.1 mmol/l Endocrine review Follow NICE diabetes guidelines http://www.nice.org.uk/CG87	Follow NICE guidelines for lipid modification http://www.nice.org.uk/nicemedia/pdf/CG67NICEguideline.pdf **AND** Consider lipid modification for any patient with known CVD or diabetes
Target Smoking cessation	**Target** Improve quality of diet Contain energy intake Daily exercise of 30 mins/day	**Target** BMI 18.5-24.9 kg/m² (18.5-22.9 kg/m² if South Asian or Chinese)	**Target** <140/90 mm Hg (<130/80 mm Hg for those with CVD or diabetes)	**Target** Prevent or delay onset of diabetes HbA_{1c} <42 mmol/mol (<6%) FPG <5.5 mmol/l	**Target** HbA_{1c} 47-58 mmol/mol (6.5-7.5%)	**Target** 30% total chol ↓ **OR** total chol ≤5 mmol/l and LDL ≤3 mmol/l (For those with known CVD or diabetes: total chol ≤4.0 mmol/l LDL ≤2 mmol/l)

Resources;

Physical Health policy link

https://www.elft.nhs.uk/sites/default/files/Physical%20Healthcare%20Policy%2014.1.pdf

Please also see Intranet for Nutrition, Venous Thrombosis Embolism, Resuscitation Medical Devices and Infection policies.

Please see **Rio electronic record** assessment tools for VTE , DNACPR and Vulnerability alerts, plus News 2 scoring , Diabetes monitoring, Nutrition monitoring /screening and Physical Health assessments.

https://www.england.nhs.uk/mentalhealth/wp-content/uploads/sites/29/2016/05/serious-mental-hlth-toolkit-may16.pdf

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/532253/JRA_Physical_Health_revised.pdf

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Rio electronic patient record, NEWS 2, VTE, forms and referrals as appropriate.

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ELFT is an NHSE national pilot site for reducing smoking among mental health inpatients elft.stopsmoking@nhs.net and will now offer post discharge support.