Stockholm public healthcare system emergency response to SARS COV2 & winter preparations

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This session

Format:

Write your questions;

George puts questions & conversation

1)Winter preparations

2)Summarise our rapid impact research

- into emergency management & organisation

3)Resources – more details

Background

- John 50% Karolinska medical university
  & 50% R&D Stockholm healthcare SLSO
- FOCUS: Stockholm healthcare: primary & community healthcare & interdependencies
  - Integrated public finance and service delivery system 2.3m
  - 110 public service delivery units (60 PHC)
  - 65% PHC is private, social care 26 municipalities
  - Municipalities contract care homes for older people

Covid winter 2020/21 Preparations

"Make it to May 2021"

EXPECT – Demand Oct-Dec 20 ; Jan-June 21

1)Resurge (any time – data hard and soft)

2)Rehabilitation (long covid – special coordination)

3)Upsurge

4)Staff

- Sustain for long haul
- Flexible working and roles HR & training
- Labour market – upskill with computer assisted decision making & devices (O2S)

Response – management

Match supply to demand: daily, weekly, monthly

How?

1)Organise for decision making and implementation

a)Authority: individuals and groups

Make decision, required to consult, Accountable – report

b)Architecture: structure of groups reporting delegation

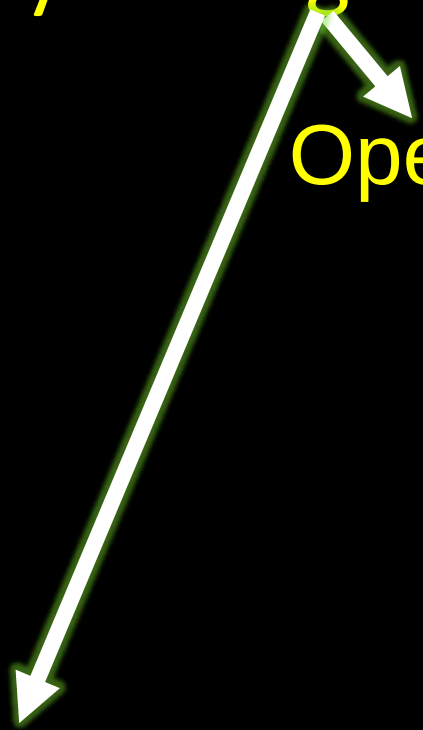
For matching daily, weekly, monthly

c)Data to inform decision making – systems and

Emergency Structure

Emergency management group 1mar 2

Operations management (normal)1



Local ”kluster” Group Private Hc + Municipality social care

Response – organisation

1)Organise for interdependence

- PHC & Community avoided hospital overload
- Social support services contributed
- Coordination & “fair shares” agreements
- Kluster organisation
  - 1)Emergency > 2)align incentives - budget and priorities – time and processes to work-through (integrated care experience)

2)Maximise digital (investment resources)

Management & Clinician Use of data for decisions

Citizens and patients – information for challenged

Virtual services and automation

Response – services & clinical

1)Barrier to access > reach out

- prevent deterioration

- Needs Delayed
  - Frightened, not in regular contact
- Data to identify, prioritise and outreach
  - Clinic data & system data
  - E.g. older person at home diabetes/heart disease; immigrant pregnant women.
- Process for clinics to use to do this
  - (QI, CME, etc.)
- Virtual and special clinics for ordinary humans

Response – services & clinical

2)Test, trace and support isolation

Don't, unless:

a)PCR Test results to person and tracer 1hr-2 days

b)Existing public health capacity – staff and skills

c)Suppliment with carefully selected and trained *local* workforce

d)Ensure support package for 10-14 days

But testing services also test vaccination delivery

3)Basics practical Response – services & clinical

a)WMD : our best vaccine

b)Relentless communication

Behaviour Modelled by respected people

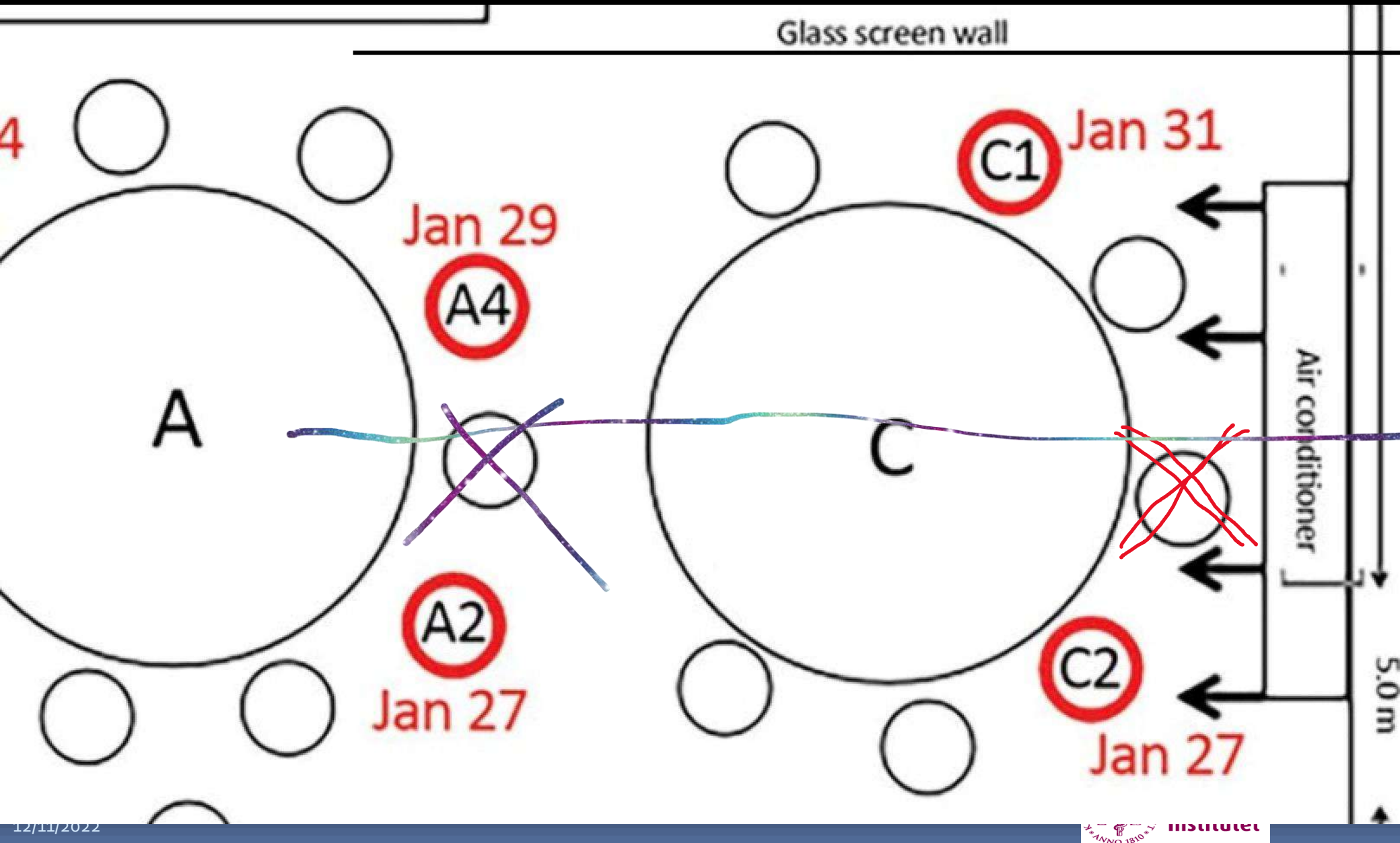
My mask protects you, please protect others

Vaccination (*not properly tested)*

c)Winter ventilation (covid safety visiting team)

- Maximum transmission: over 15 mins in elevator asymptomatic
- 15 air volume changes/hr Air flow & modern filtration (787)
- Buy heaters for window sills – flow direction away

3)Basics practical Response – services & clinical



4)Vaccine update

Possibly before Xmas

- First Release for priority recipients

Civilian wide availability

- February-May 2020

140 types in testing - 5 front runners

- Adenovirus (UK) Moderna (mRNA)

Prepare delivery logistics, incentives and communication

Winter Preparations

- See resources: UK & Sweden scenarios
- & LTC homes practical guides

Questions now ?

Part 2: lessons from emergency phase rapid research

Our research: What is context?

- Public health agency Sweden
- +50, over 11

FEATURE

Check for updates

Stockholm
hebamhabib@gmail.com
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Published: 12 June 2020

CORONAVIRUS

Has Sweden's controversial covid-19 strategy been successful?

Sweden has stood out in the global pandemic by eschewing lockdown and seemingly aiming for herd immunity. **Heba Habib** reports that Sweden's public was supportive of the strategy, but is now paying a heavy price.

BMJ: first publish

Coronavirus tracked: Charting Sweden's disastrous no-lockdown strategy

Sweden's decision to shun strict Covid-19 containment measures may have kept businesses open, but at what cost?

Anthony Cuthbertson | @ADCuthbertson | | 221 comments

Sweden has taken the ignominious title of the country with the world's highest death rate from Covid-19.

The title, which was was briefly held by the UK late last month, comes after Swedish officials decided to ignore the lockdown advice of countless health experts and kept the country largely open during the pandemic.

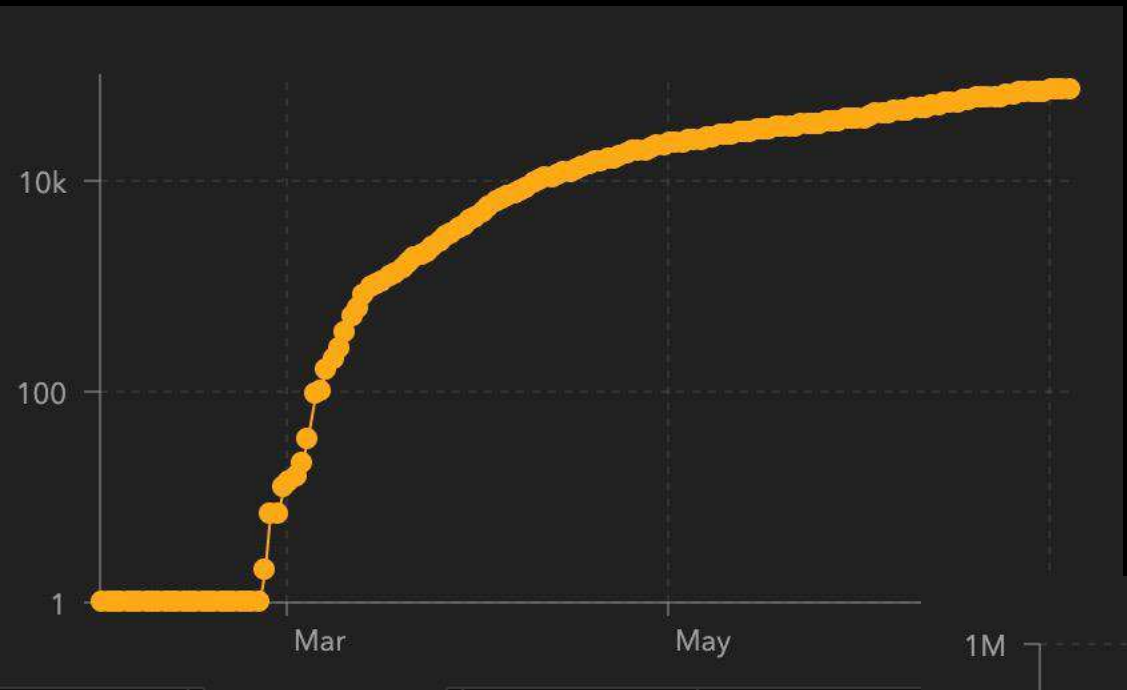
The number of deaths per capita in Sweden is now more than four-times that of its Nordic neighbours.

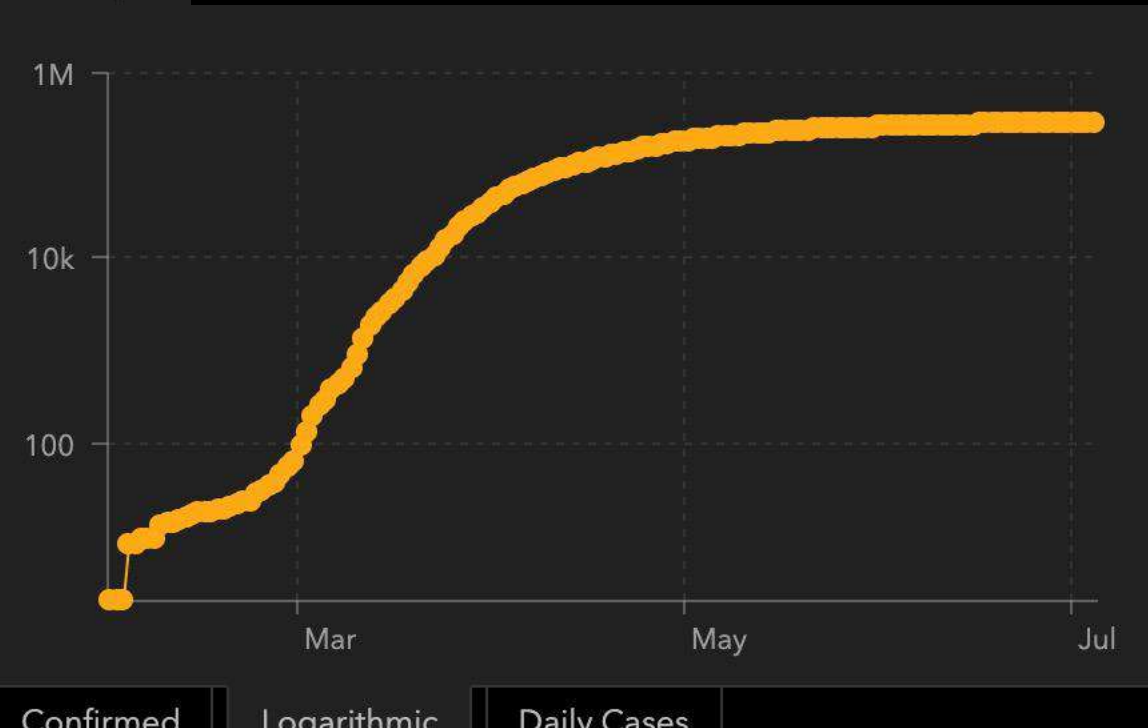
THE STORM JUST HIT AND WE WENT FROM DONATING T THE FOOD BANK TO NEEDING IT.

Donna, Louisiana

The story

5july20 JH site 5,420 & 44,283 deaths





12/11/2022

31 January SARS COV-2

11 march Covid 19 death

WHO pandemic

Karolinska Institutet

Rapid impact research

- Relevance to decision makers
- Limited resources

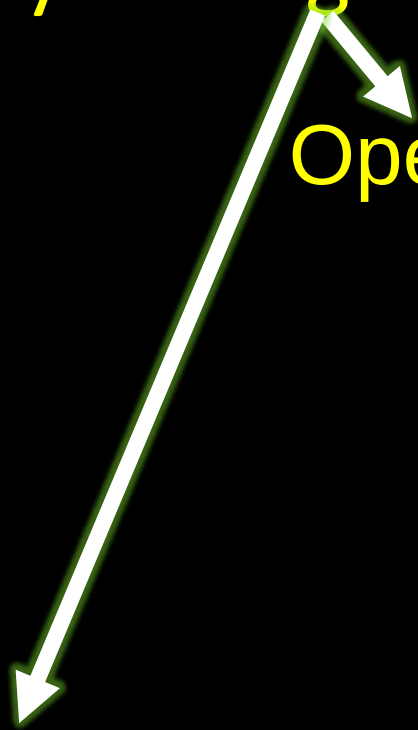
15th March Started (fast tracked ethics)

Data collected

Emergency Structure

Emergency management group 1mar 2

Operations management (normal)1



Local ”kluster” Group Private Hc + Municipality social care 2

0

What are outcomes of implementation?

Example 1: PPE & supplies

- Purchasing and logistics unit Scania
- Other methods to enable implementation:

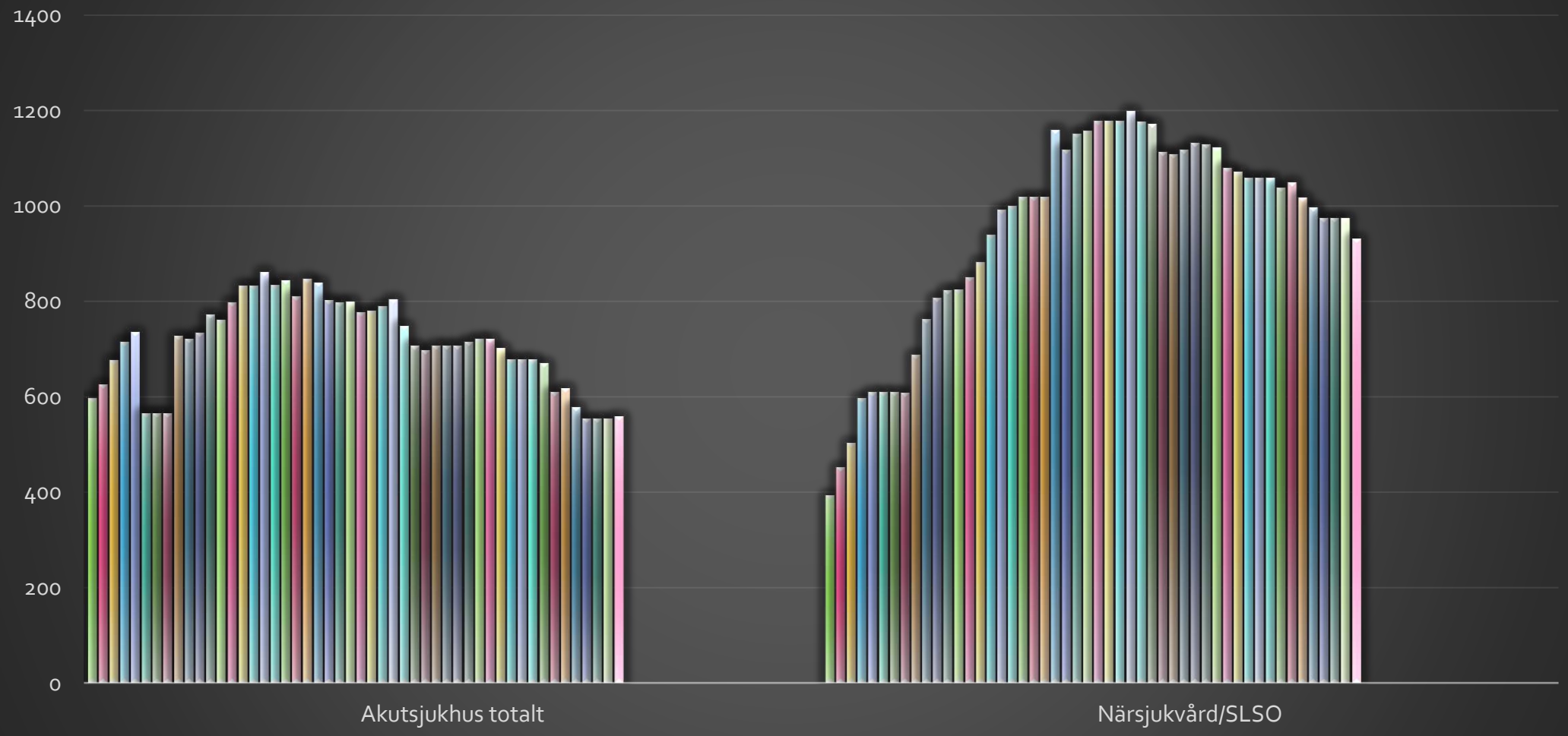
- Sara Lindholm
  - https://www.y
    k&feature=em

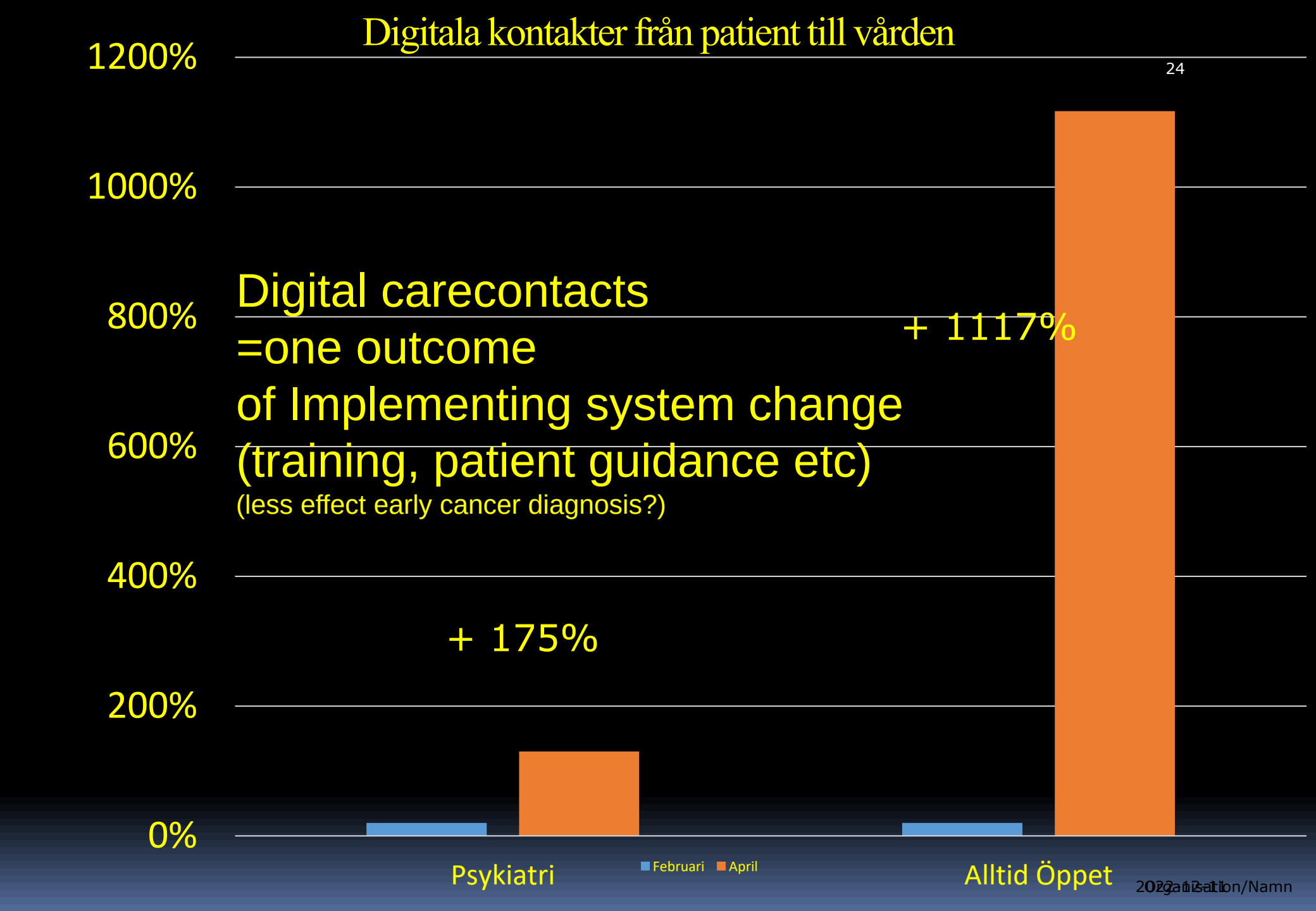
One challenge

- Data for management decisions
  - part of implementation
- Resolution: Combine data bases
- Prediction model
  - modified with our data

2

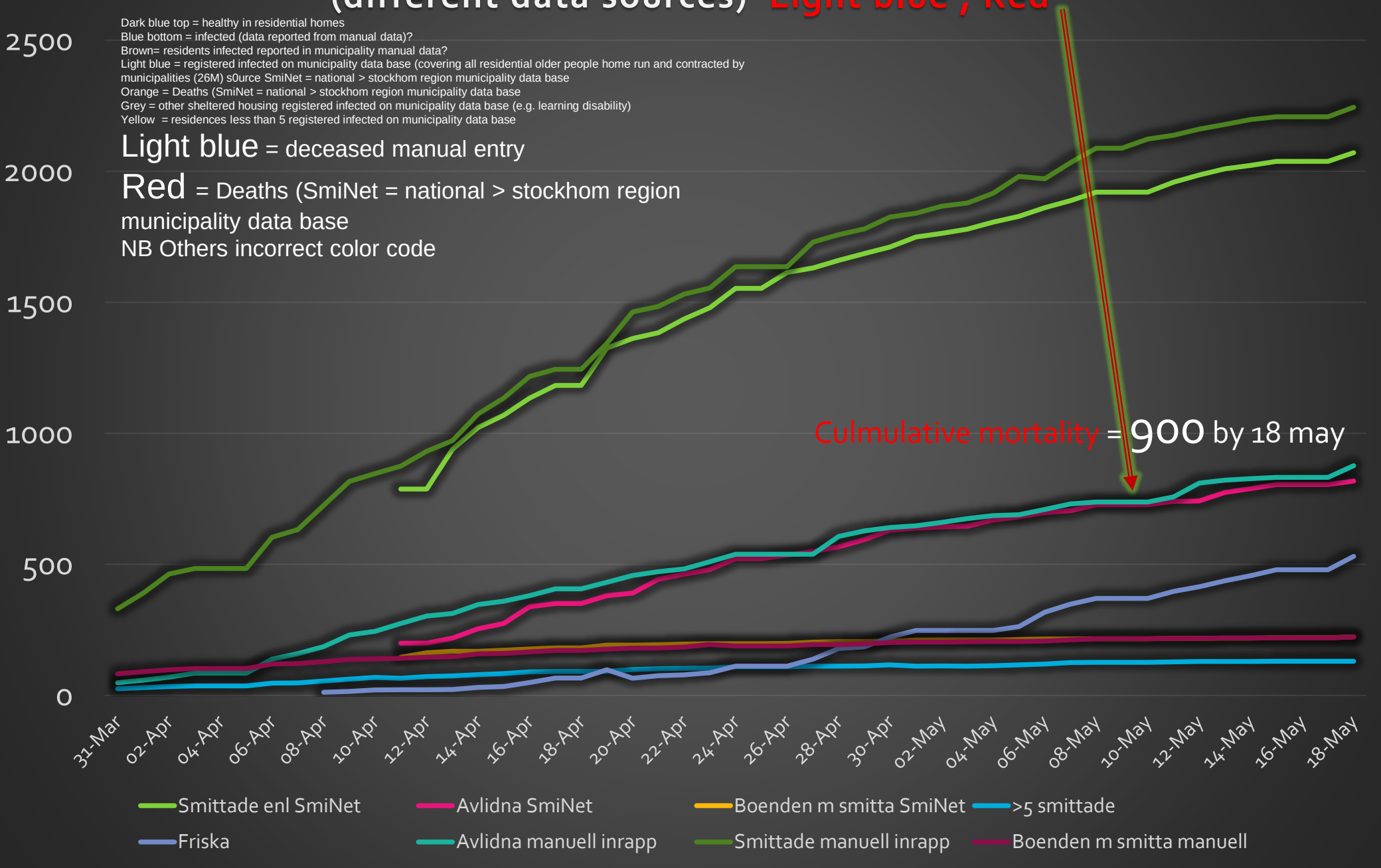
Tested & Treated 1) Hospital ED
2) PHC acute care
Vård på akutsjh och inom närsjukvård




Digitala kontakter från patient till vården
1200%
1000%
800%
600%
400%
200%
0%
24
Digital carecontacts
=one outcome
of Implementing system change
(training, patient guidance etc)
(less effect early cancer diagnosis?)
+ 1117%
+ 175%
Februari
April
Psykiatri
Alltid Öppet
2022-12-11
Organisation/Namn

Mortality Covid 19 Older Residential municipality

(different data sources) Light blue , Red



Rapid Implementation Research

- Presented data and projections
- Informed decisions
- Use data later for evaluation

Helped quick access

- a)Partnership,
- b)Trust,
- c)Value to services

lessons

- Three “emergent responses “with different organisation and systems
  - corresponding to three timescales of illness demand:
  - emergency, resurgence, and upsurge of chronic mental and physical health.
  - Responses need to be managed separately to, but coordinated with, existing routine service operations.
- In dynamic situations the most effective type of response is an emergent data-driven iterative adaptive response.

lessons

- Private long term care residential services:
  - everyones' problem but not ones' responsibility?
- Systems understanding of interdependencies
- Matching demand to supply in an evolving crisis
- Data and rapid research

Questions

- Surprises?
- Say more about…
- Our experience different/similar

Reflections

- Different responses London/Stockholm – benefits harms and lessons?
- London lock down vs Stockholm none
- Stockholm response: hard and early in healthcare not in public health
- London hard and late in public health & variable in healthcare
- London – fragmented health system vs more integrated Stockholm
- Similar death rate/population

Resources

Winter preparations

- UK
  - Academy of Medical Sciences 2020 Preparing for a challenging winter 2020-21, The Academy of Medical Sciences, London. https://acmedsci.ac.uk/file-download/51353957
  - Chiolero A 2020 Predicting covid-19 resurgence: do it locally, BMJ 2020;370:m2731
- Sweden 3 scenarios
  - “Scenarios: Three contagion scenarios within the government assignment "Plan for possible new outbreaks of covid-19", Folkhälsomyndigheten, Stockholm., FolkhalsomyndighetenScenarier-tre-smittspridningsscenarier-plan-eventuella-nya-utbrott-covid-19.pdf

Nursing homes/LTC

- CDC https://www.cdc.gov/longtermcare/;
- Eldercare Workforce Alliance: www.eldercareworkforce.org
- NAHCA: www.nahcacna.org
- PHI: www.phinational.org ;
- IHI:
- https://my.ihi.org/materials/covid19-nursinghomes.aspx ;
- and https://asprtracie.hhs.gov/

Prediction algorithm using local data (open source)

- Weissman GE, Crane-Droesch A, Chivers C., et al. Locally Informed Simulation to Predict Hospital Capacity Needs During the COID-19 Pandemic. published online at Annals.org, April 7, 2020. https://doi.org/10.7326/M20-1260. See also COVID-19 Hospital Impact Model (CHIME) (http://penn-chime.phl.io)

References

- Ohrling, M Øvretveit, J Lockowandt, U, Brommels, M 2020 Management of emergency response to SARS COV-2 outbreak in Stockholm and winter preparations. Journal of Primary Healthcare, in press for publication sept 2020
- Ovretveit J 2020 Implementation researchers can improve the responses of services to the COVID-19 pandemic Implementation Research and Practice Volume 1: Jan-Dec 2020 1–6 https://doi.org/10.1177/2633489520949151

Value of Rapid Learning Experimental Cycle (RLEC)

- define problem
- decide data indicating problem solved
- design and implement solution
- review data and revise solution
- repeat as situation changes