A conceptual model for person-centered diagnosis in general medical practice

Mike Klinkman
Chris Van Weel

(see also: J Eval in Clinical Practice, October 2010)

Primary care doctors help persons with problems over time.

Persons, not "patients"

We give advice – not orders

Problems, not diagnoses --- Many, not one

Episodes of care (longitudinal care), not single visits

Core tasks of primary care

- To understand the full range of clinical problems faced by patients

- To know the social and personal context in which these problems occur

- To take into account patients' own priorities and goals when making decisions about treatment

- To carry out preventive services and help patients identify and manage health risks

….in a stream of short clinical encounters over time, where circumstances, priorities, clinical knowledge, and "rules" are all moving targets

Rethinking primary care diagnosis: Mapping problems

The 3 dimensional matrix of primary care "diagnosis"

Social
problems

Emotional
(mental health)
problems

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General
medical
problems
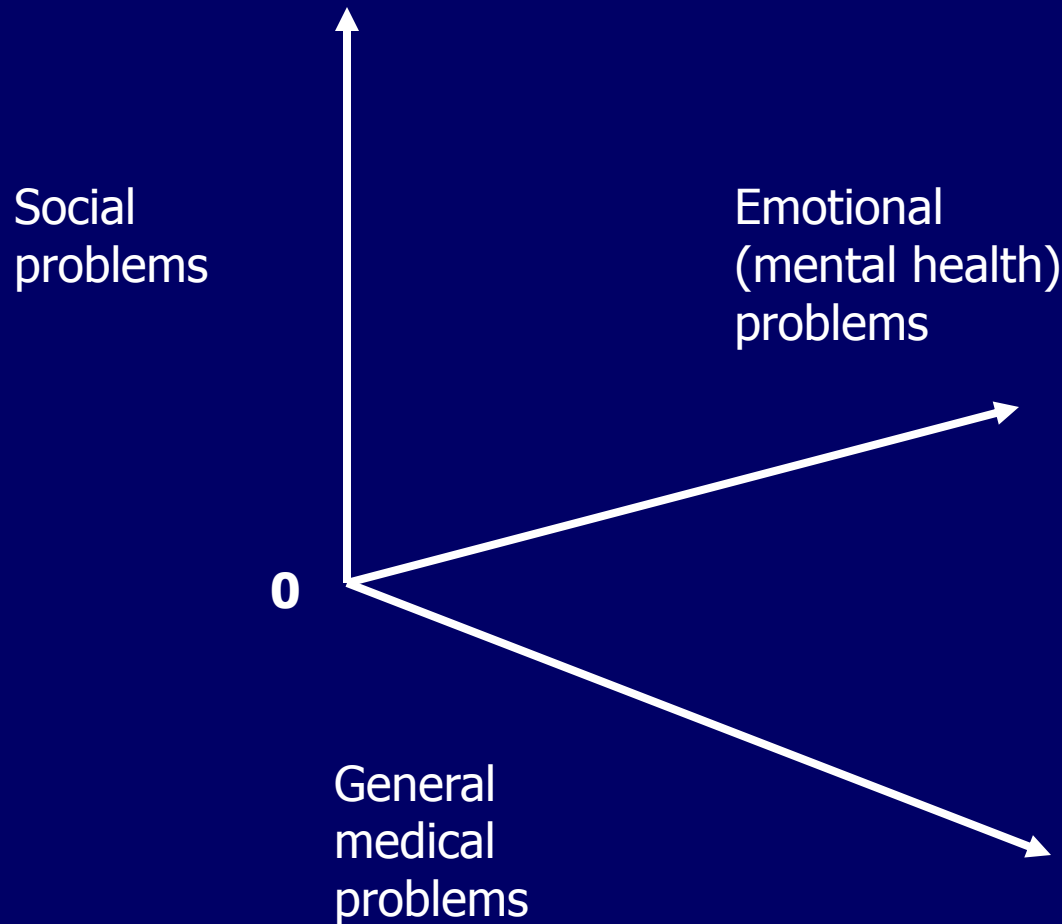
(Klinkman and Gask, 2009)

Afternoon of 22 May, 2009

RN

45 year old man, here for "cough"

Has Banyan-Riley-Ruvalcaba (genetic) syndrome, pulmonary hypertension (mild), asthma and recurrent bronchitis, chronic trunk/back pain, chronic airway problems with indwelling tracheostomy and MRSA colonization, toxic multinodular goiter, chronic depression, anxiety, and sleep problems

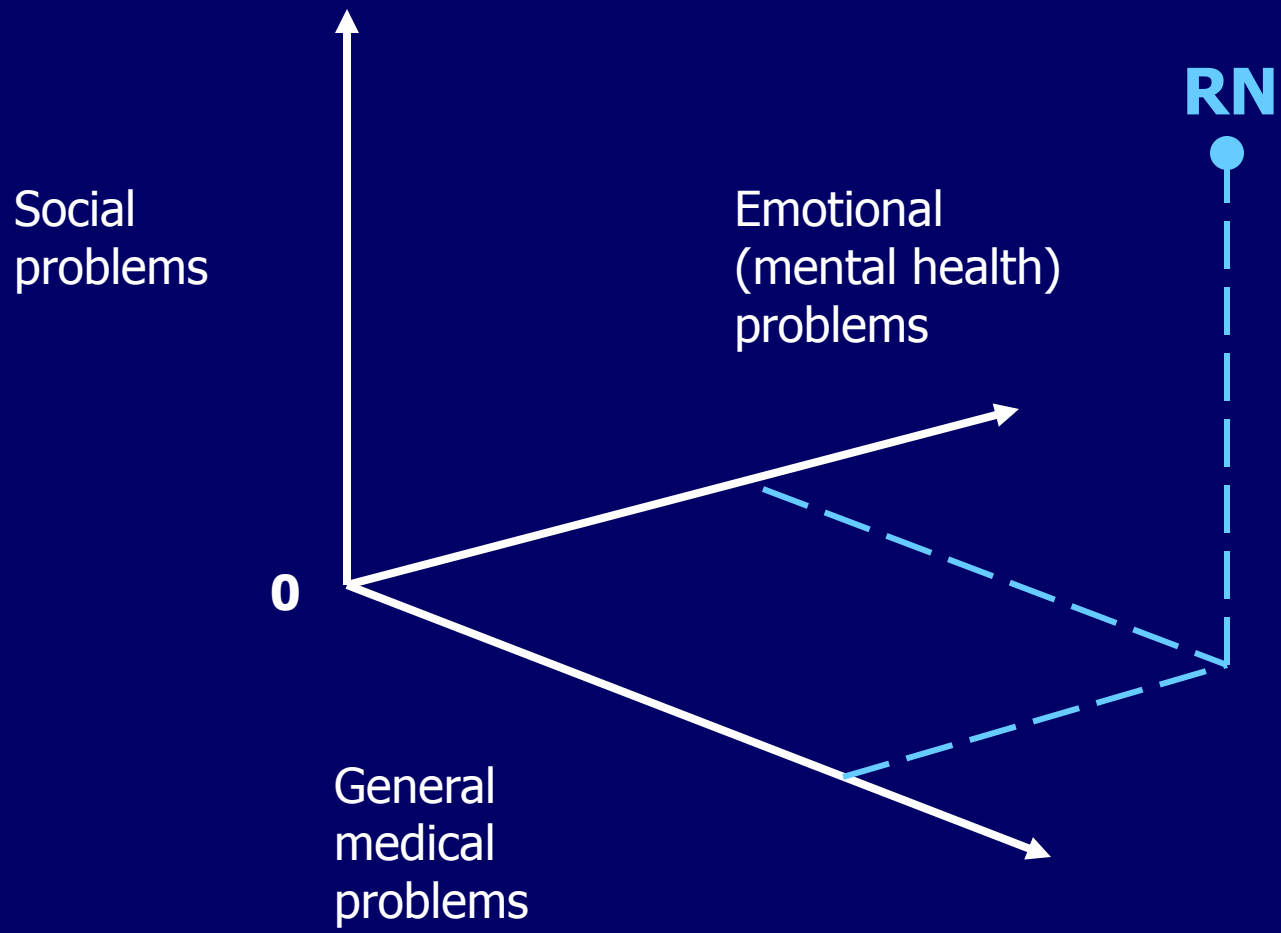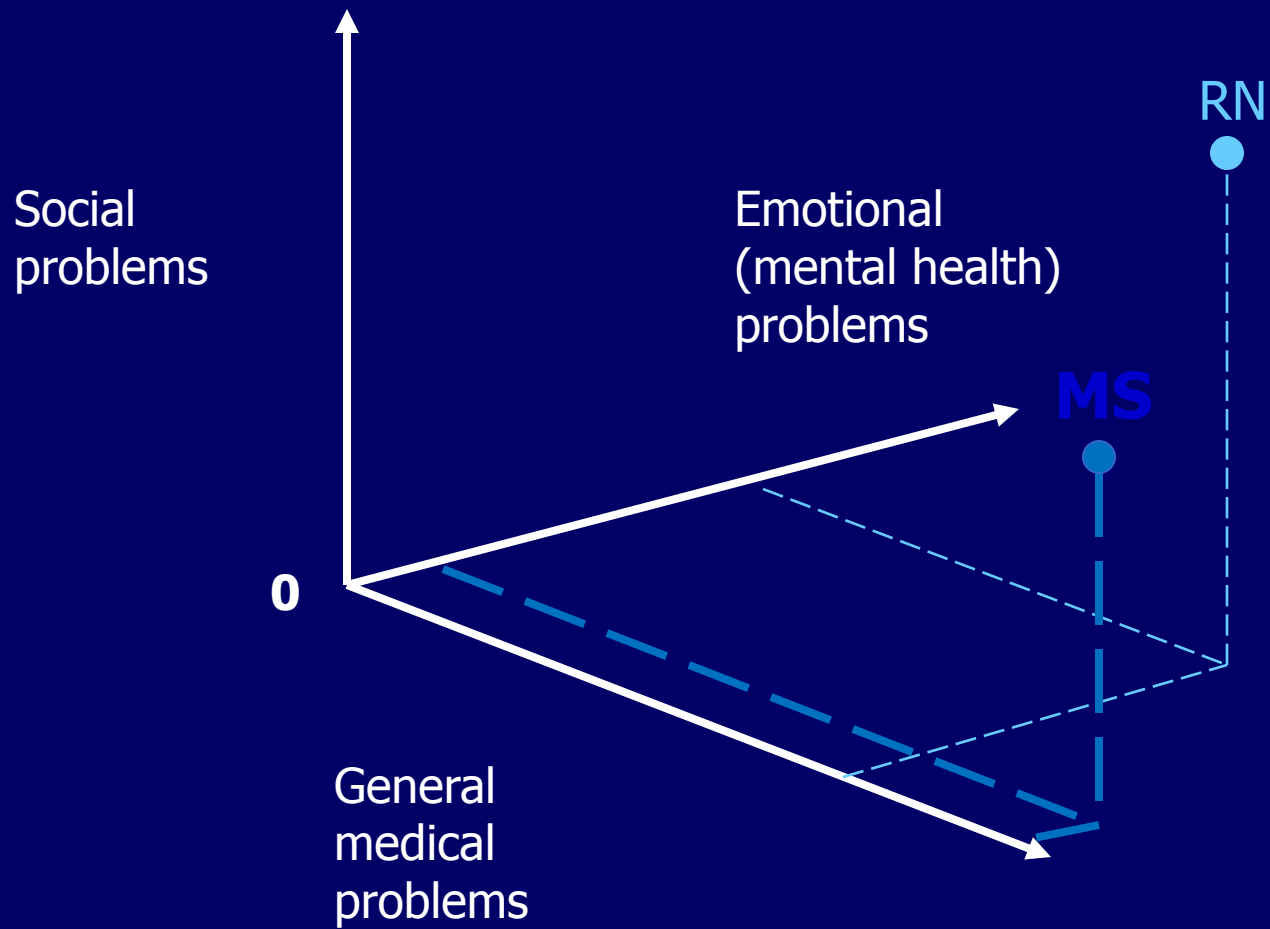Married, 11 year old son with same syndrome and ADHD
Wife works as RN
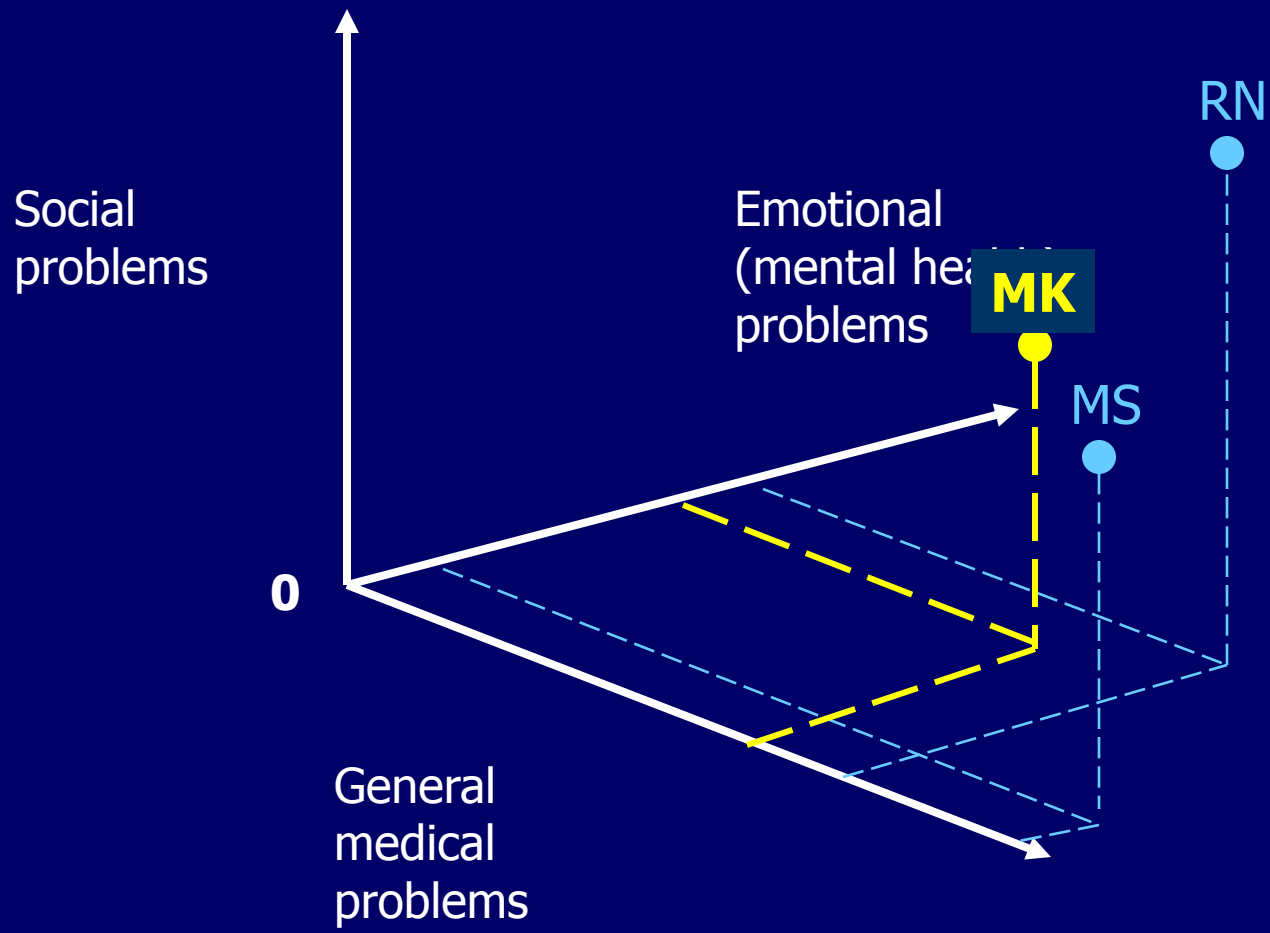He is disabled, does part-time volunteer work

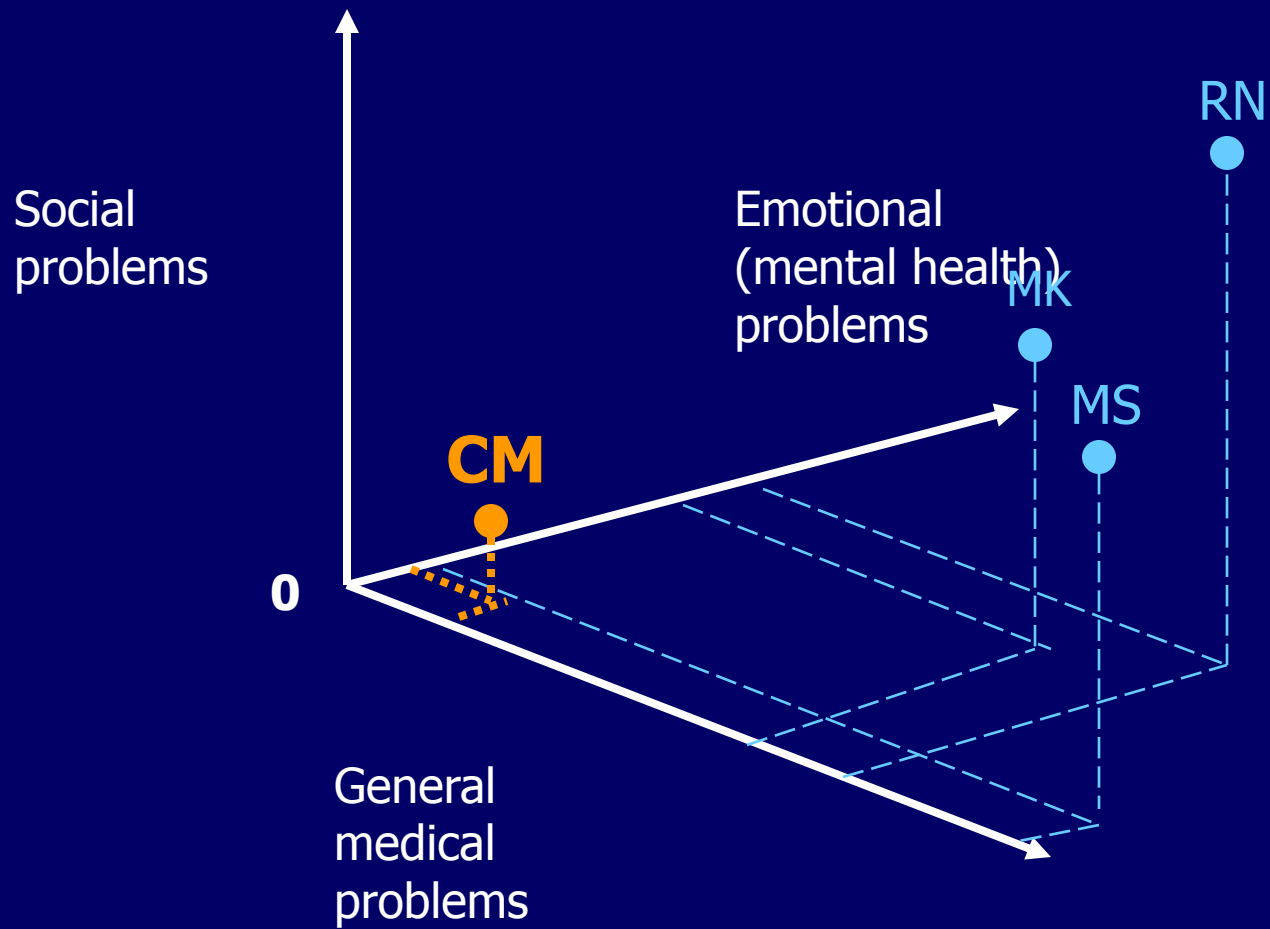Relationship problems with wife – intimacy, credit and overspending
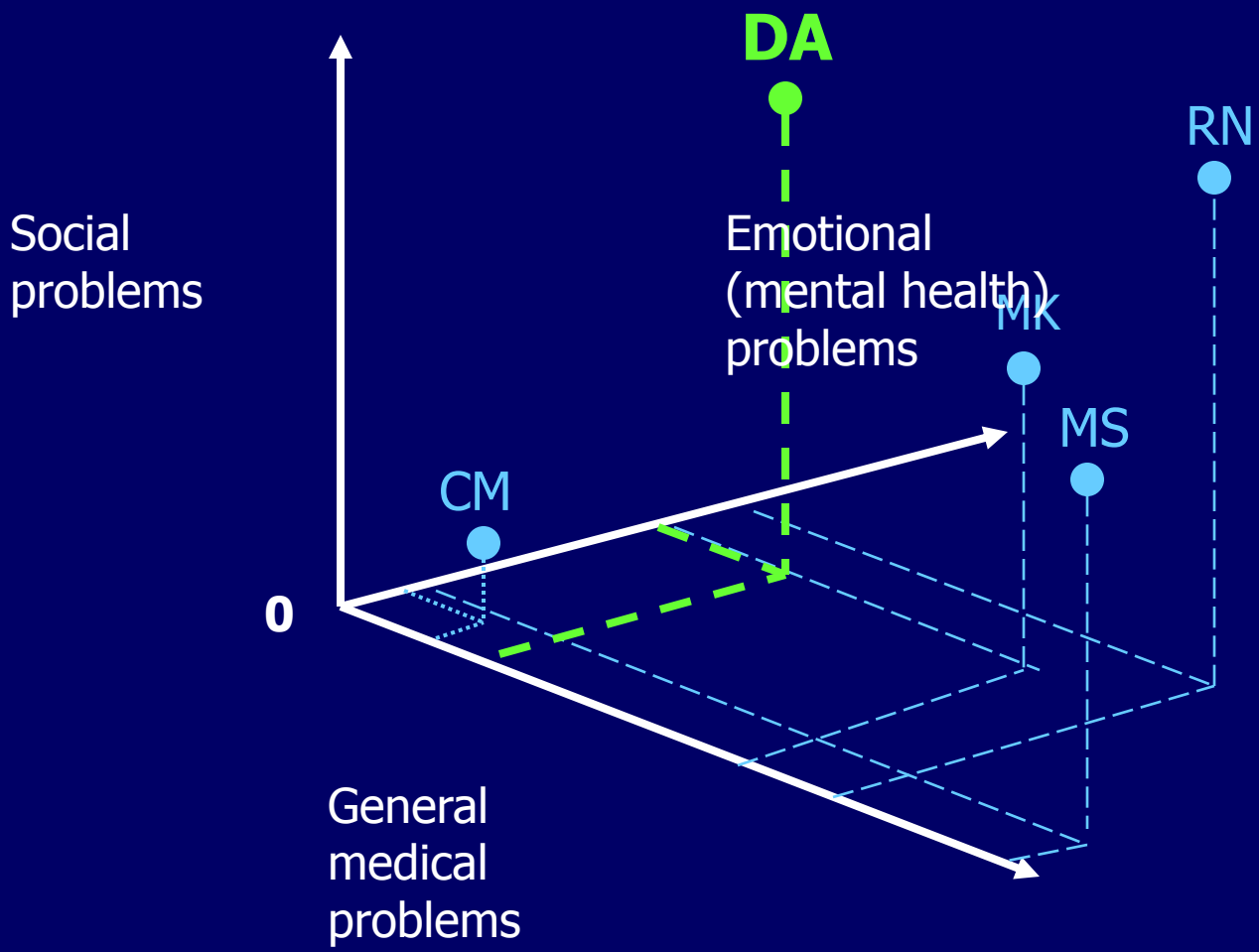Extreme frustration with limitations in health and function

Real reason for visit – depression and relationship issues, worry, anger management
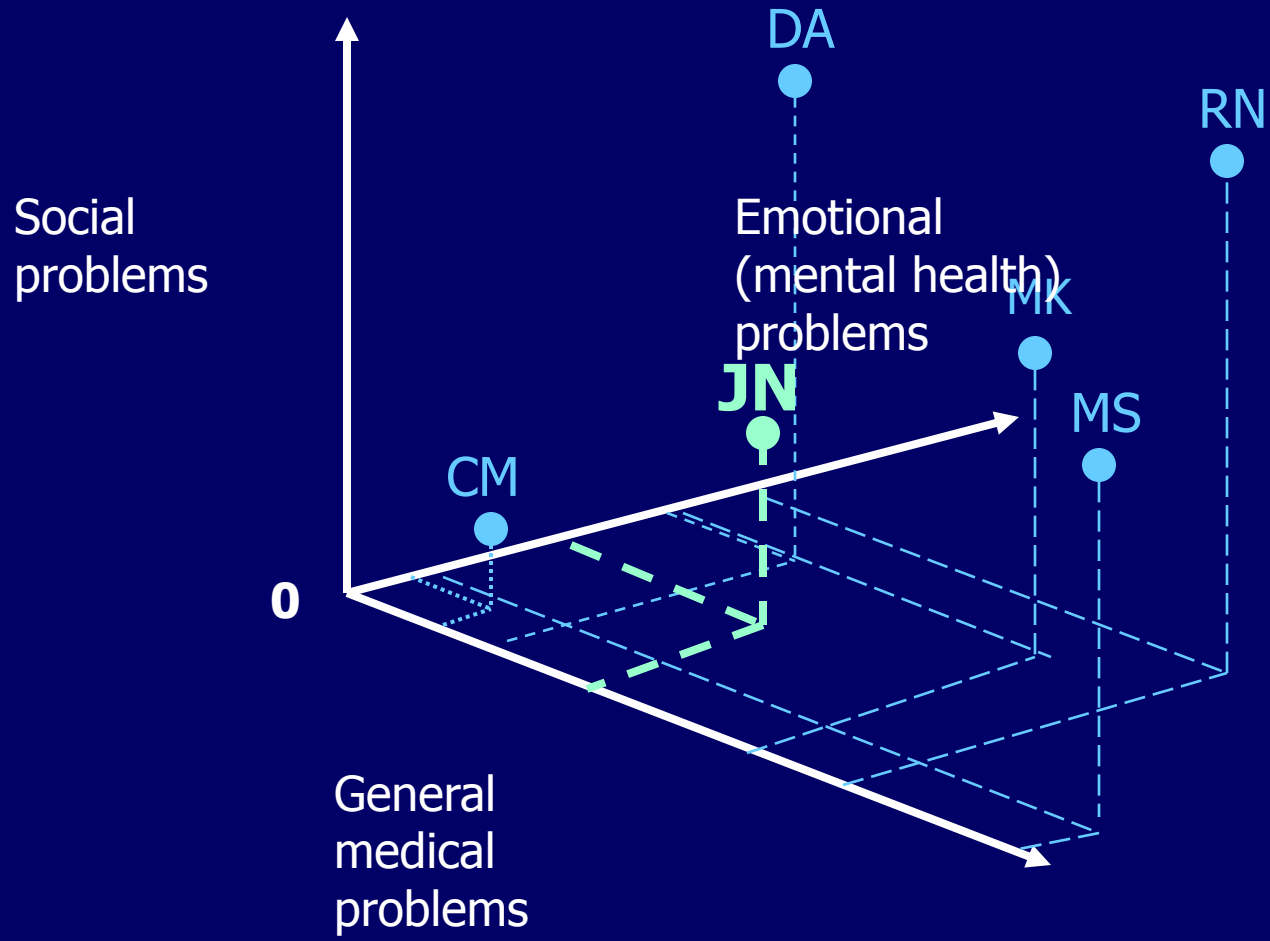
Social problems

Emotional (mental health) problems

General medical problems

RN

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Social
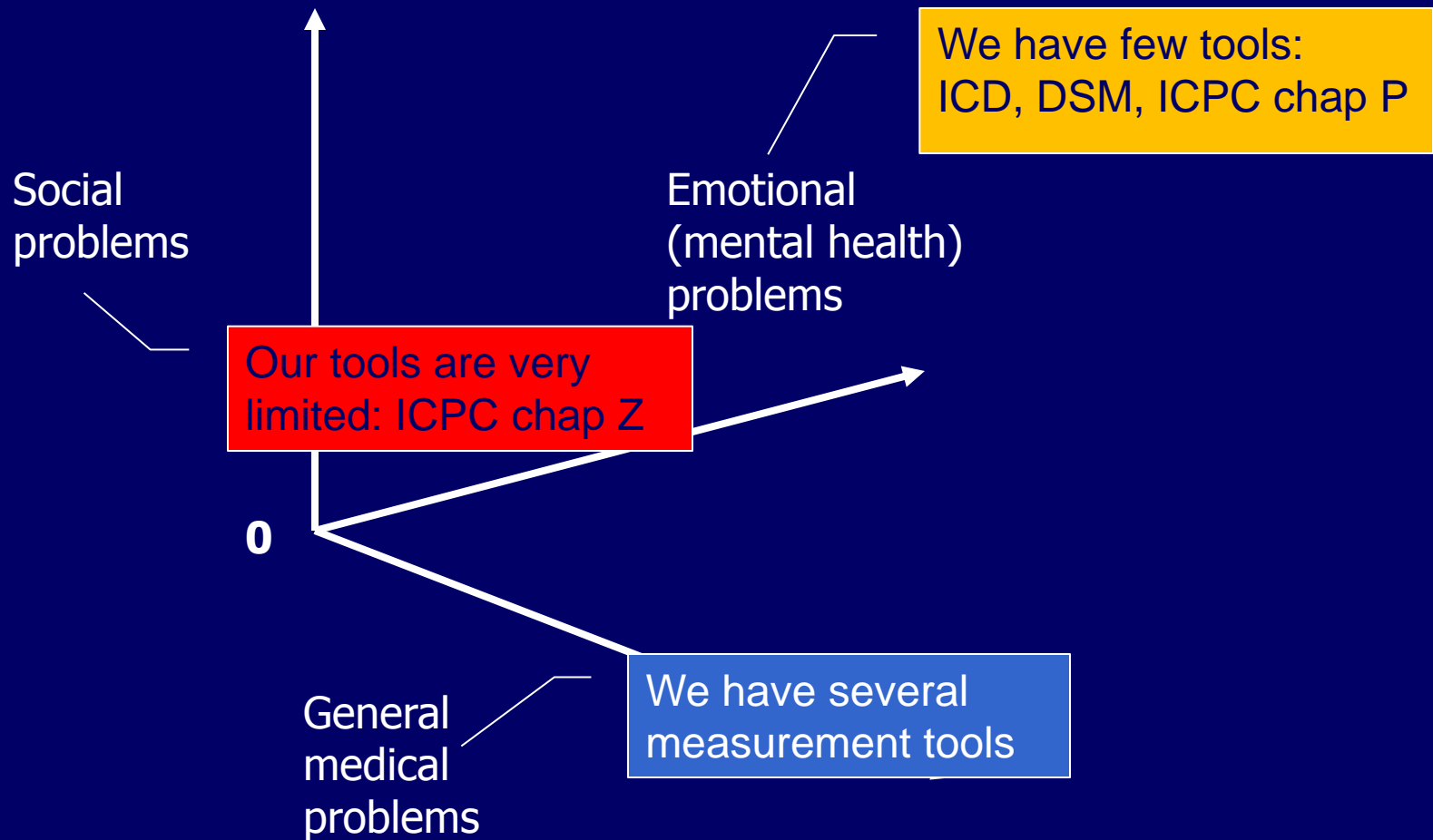problems

Emotional
(mental health)
problems

RN

MS

0

General
medical
problems

This mapping can show us where intervention is most needed. But our measurement tools are incomplete.

Social problems

Emotional (mental health) problems

We have few tools: ICD, DSM, ICPC chap P

Our tools are very limited: ICPC chap Z

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General medical problems

We have several measurement tools

ICPC psychosocial content

- Provides variety of symptoms as RFE and diagnosis
  - *Feeling anxious (P01)*
  - *Acute stress reaction (P02)*
  - *Feeling depressed (P03)*
  - *Feeling irritable/angry (P04)*

- Provides limited number of (categorical) diagnoses
  - *Depressive disorder (P76)*

- Provides social problems (chapter Z)

- Data structured as episode(s) of care, enabling retrieval of changes in diagnosis over time

- The combination allows for rich characterization of emotional problems from simple components

Z01	Poverty/financial problem
Z02	Food/water problem
Z03	Housing/neighbourhood problem
Z04	Social cultural problem
Z05	Work problem
Z06	Unemployment problem
Z07	Education problem
Z08	Social welfare problem
Z09	Legal problem
Z10	Health care system problem
Z11	Compliance/being ill problem
Z12	Relationship problem with partner
Z13	Partner's behaviour problem
Z14	Partner illness problem
Z15	Loss/death of partner problem

Z16	Relationship problem with child
Z18	Illness problem with child
Z19	Loss/death of child problem
Z20	Relationship problem parent/family member
Z21	Behaviour problem parent/family member
Z22	Illness problem parent/family member
Z23	Loss/death of parent/family member problem
Z24	Relationship problem friend
Z25	Assault/harmful event problem
Z27	Fear of a social problem
Z28	Limited function/disability (Z)
Z29	Social problem NOS

Where do we go from here?

Disease-technology path

- "Enterprise" health IT products - expensive, complex, based on diseases and templates

- Decision support based upon specific conditions rather than persons
  - "disease management" templates

- Decision support based on specific highly-granular data
  - "knowledge management"

- Quality assessment and physician payment based on measurable disease-specific outcomes

- Electronic Personal Health Records that are not interoperable with provider-side health IT

- Competition rather than collaboration

Person-centered path

- Simple, interoperable "clinical groupware" with components that accommodate a patient-oriented data model

- Very simple decision support tools (simple prompts or reminders) -- until we understand how all aspects of biopsychosocial model operate in care

- Quality assessment and payment based upon achieving mutually-agreed upon goals for care, or ordered by priority

- Personal Health Records that link to provider-side health IT to integrate person-centered care into routine clinical workflow

How do we get there?

Current work of WICC

- Creating and advocating for a (conceptual) data model that includes the needed components and structure

- Finding the best source(s) of that data

- Finding the best ways to collect that data -given the constraints of primary care

STRUCTURE

Person:
demographics
social structure
goals, preferences

Problem(s):
RFE as starting point
current/active
severity

Clinical Modifiers:
prevention
risk factors
Significant events

Actions ("Process"):
Decisions
Interventions
Plans

Time:
Episode structure

Data import/export:
Exchange protocols

**A Primary Care Data Model:
simple building blocks to capture complex reality.**

Klinkman, Phillips, Green, Pace: 2008

Direct inputs from people.

INPUTS

STRUCTURE

People
[templates or interface terminologies, through PHRs]

Clinicians
[natural language, interface terminologies, classifications]

Person:
    demographics
    social structure
    goals, preferences
Problem(s):
    RFE as starting point
    current/active
    severity
Clinical Modifiers:
    prevention
    risk factors
    Significant events
Actions ("Process"):
    Decisions
    Interventions
    Plans
Time:
    Episode structure
Data import/export:
    Exchange protocols

Clinician inputs.

Automated inputs and data exchange.

STRUCTURE

Person:
demographics
social structure
ICPC (to limited extent)

Problem(s):
current/active
severity
ICPC

Clinical Modifiers:
prevention
risk factors
Signs/symptoms
ICPC (to limited extent)

Actions ("Process"):
Decisions
Interventions
Plans
ICPC

Time:
Episode structure
ICPC

Data import/export:
Exchange protocols

(we need help with this one)

Priority area for ICPC-3 development

ICPC – the International Classification of Primary Care – provides structure and basic content for the Data Model

Why is ICPC so useful here?

- Episode of care structure tracks process of care for problem over time

- Incorporates patient "voice" in Reason for encounter (RFE)

- Allows symptom diagnoses where appropriate: does not force disease or disorder diagnosis

- Accommodates social problems (chapter Z)

- Limited granularity of basic code set – based upon prevalence of diagnosis

- NOT A TERMINOLOGY but mapped to standard terminologies, classifications

- Field tested - in use in over 20 countries worldwide

…and we can't manage information well

- Information overload on specific clinical problems (new guidelines, new treatment recommendations, new data)

- Lack of knowledge about how clinical problems interrelate makes information irrelevant to managing patients in the 'real world'

- Increased time and effort required to manage complex health information technology software

- The current generation of EHRs do not accommodate patient-side data such as the stated reason(s) for encounter, patients' own priorities and goals, or relevant social context

- Coordination of information – and care – between primary and specialty practice has become more important, and is largely unsupported by health IT