Strumenti per la valutazione del rischio nutrizionale

Giorgio Bedogni

Domanda

- Quali sono i criteri metodologici da utilizzare per la scelta di uno strumento di valutazione ("screening") del rischio nutrizionale?

Una scelta davvero ampia...

- “Over 70 screening tools were reviewed in 2005, including many for the elderly, but excluding many so-called ‘local’ screening tools”

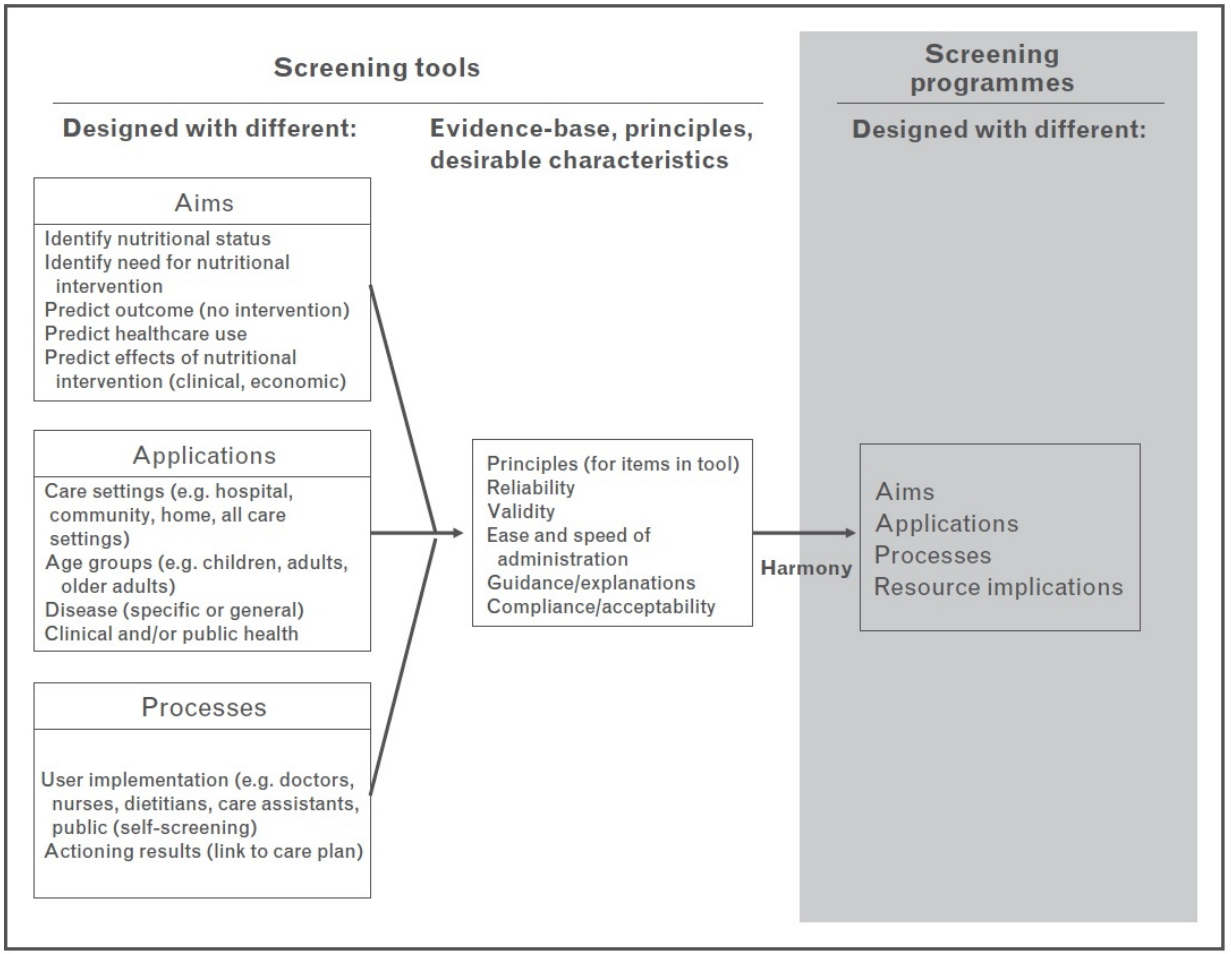
Elia M & Stratton R. *Curr Opin Clin Nutr Metab Care* 2011; **14**:425-433.

…ma solo in apparenza

- “Such approaches need to be contextualised within a framework for evidence-based screening tool selection”

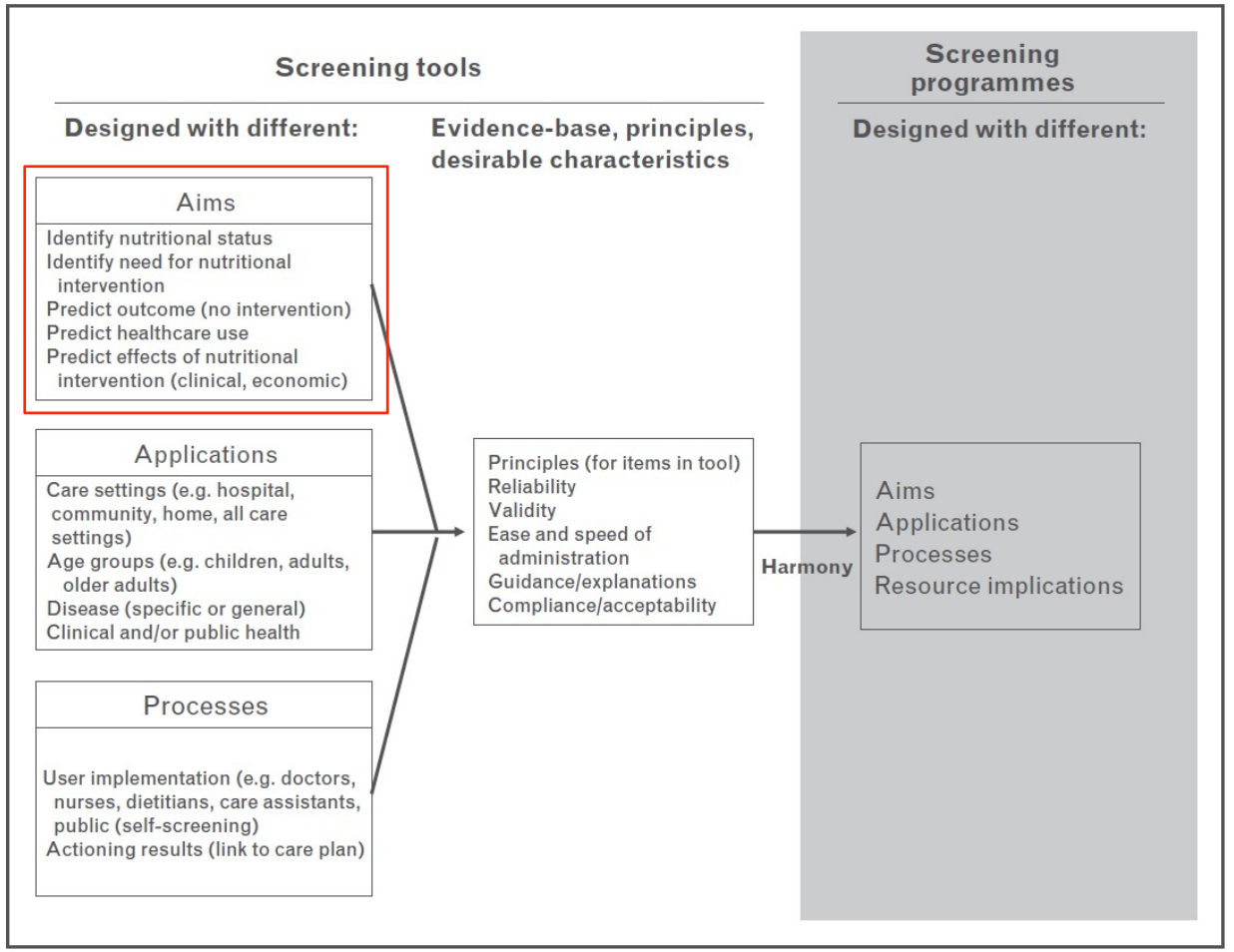
Elia M & Stratton R. *Curr Opin Clin Nutr Metab Care* 2011; **14**:425-433.

Un framework per scegliere



Elia M & Stratton R. *Curr Opin Clin Nutr Metab Care* 2011; **14**:425-433.

Un framework per scegliere

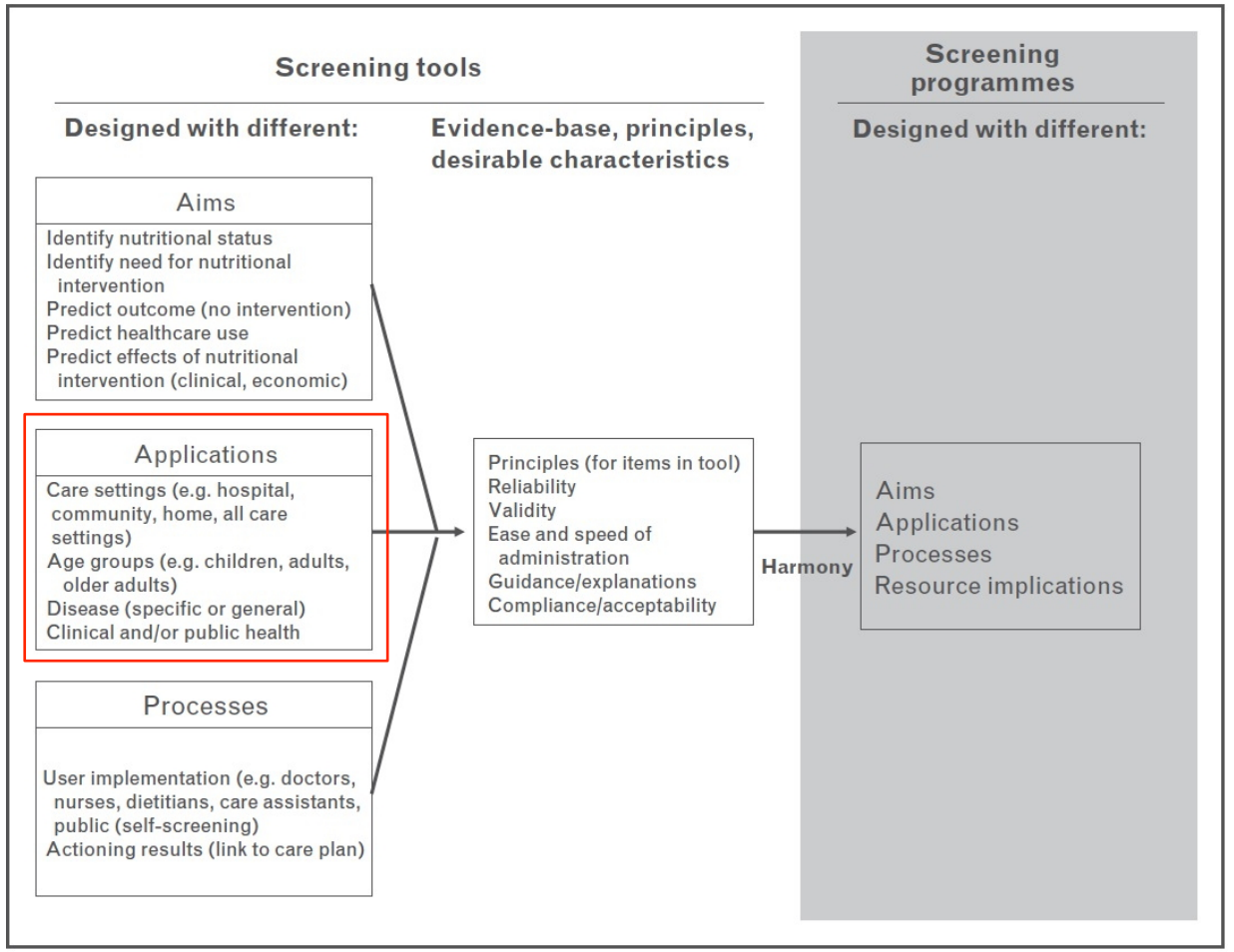


Elia M & Stratton R. *Curr Opin Clin Nutr Metab Care* 2011; **14**:425-433.

Aims

Obiettivo	**Esempio**
1. Identificare lo stato nutrizionale	Mini Nutritional Assessment (MNA)
2. Identificare la necessità di un intervento nutrizionale	Malnutrition Universal Screening Tool (MUST)
3. Predire outcome clinici (senza intervento nutrizionale)	Subjective Global Assessment (SGA)
4. Predire l'uso di risorse sanitarie	Nutritional Risk Index (NRI)
5. Predire gli effetti clinici dell'intervento nutrizionale	Nutritional Risk Screening 2002 (NRS-2002)

Applications



Elia M & Stratton R. *Curr Opin Clin Nutr Metab Care* 2011; **14**:425-433.

Applications/1. setting

- Nell'ottica di un'integrazione Ospedale-Comunità è senz'altro meglio utilizzare lo stesso strumento (*purché* validato in entrambi i contesti)

Applications/1. setting

Proceedings of the Nutrition Society (2010), **69**, 465–469 doi:10.1017/S0029665110001850
 First published online 16 June 2010

The Annual Meeting of the Nutrition Society and BAPEN was held at Cardiff International Arena, Cardiff on 13–14 October 2009

Conference on 'Malnutrition matters'

Symposium 2: The skeleton in the closet: malnutrition in the community
Malnutrition in the UK: where does it begin?

C. A. Russell[1*] and M. Elia[2]

[1]*21 Gayton Road, Eastcote, Towcester, Northants NN12 8NG, UK*

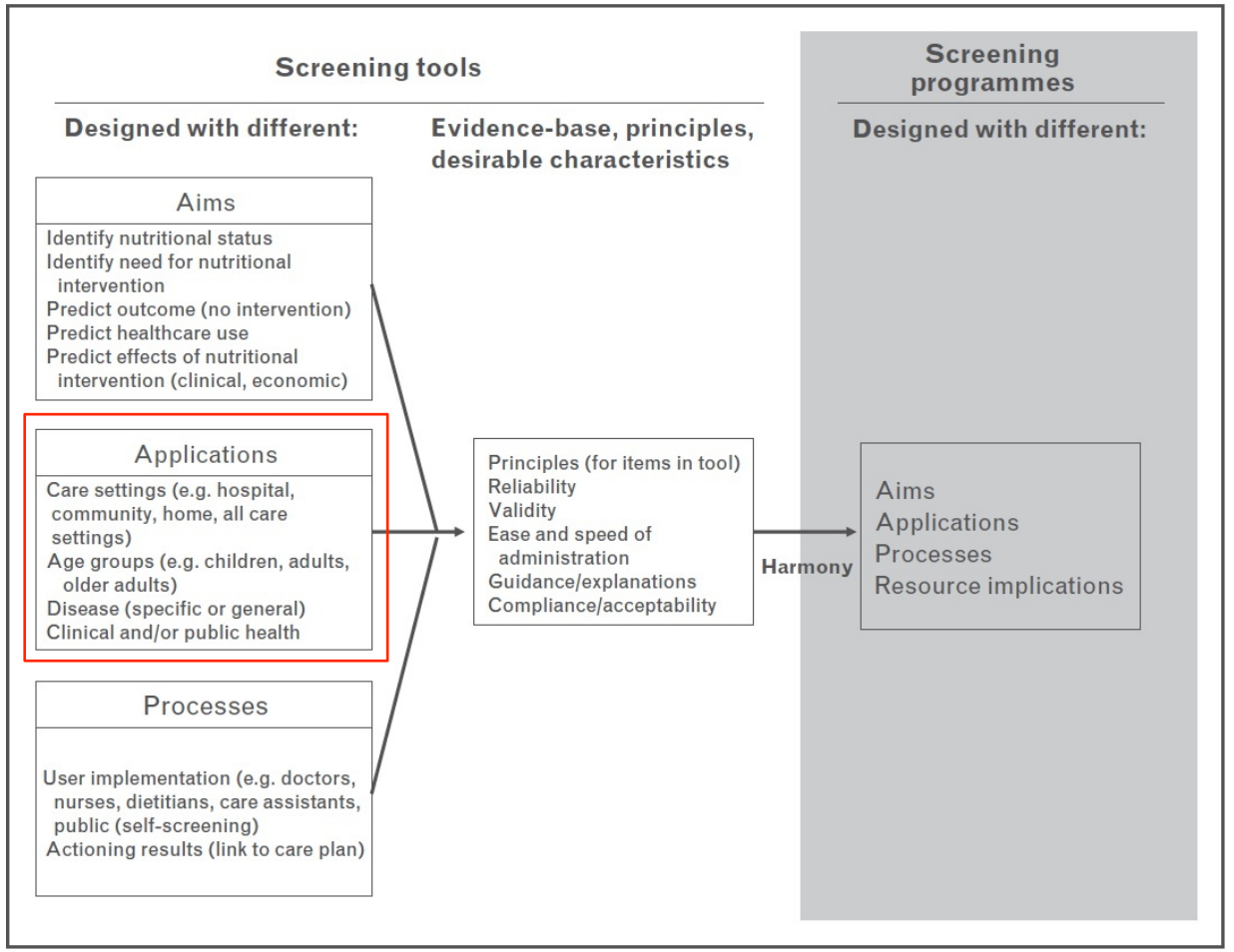
[2]*Institute of Human Nutrition, University of Southampton, Southampton General Hospital, Southampton SO16 6YD, UK*

Russel CA & Elia M. *Proc Nutr Soc* 2010; **69**:465-469.

Applications/1. setting

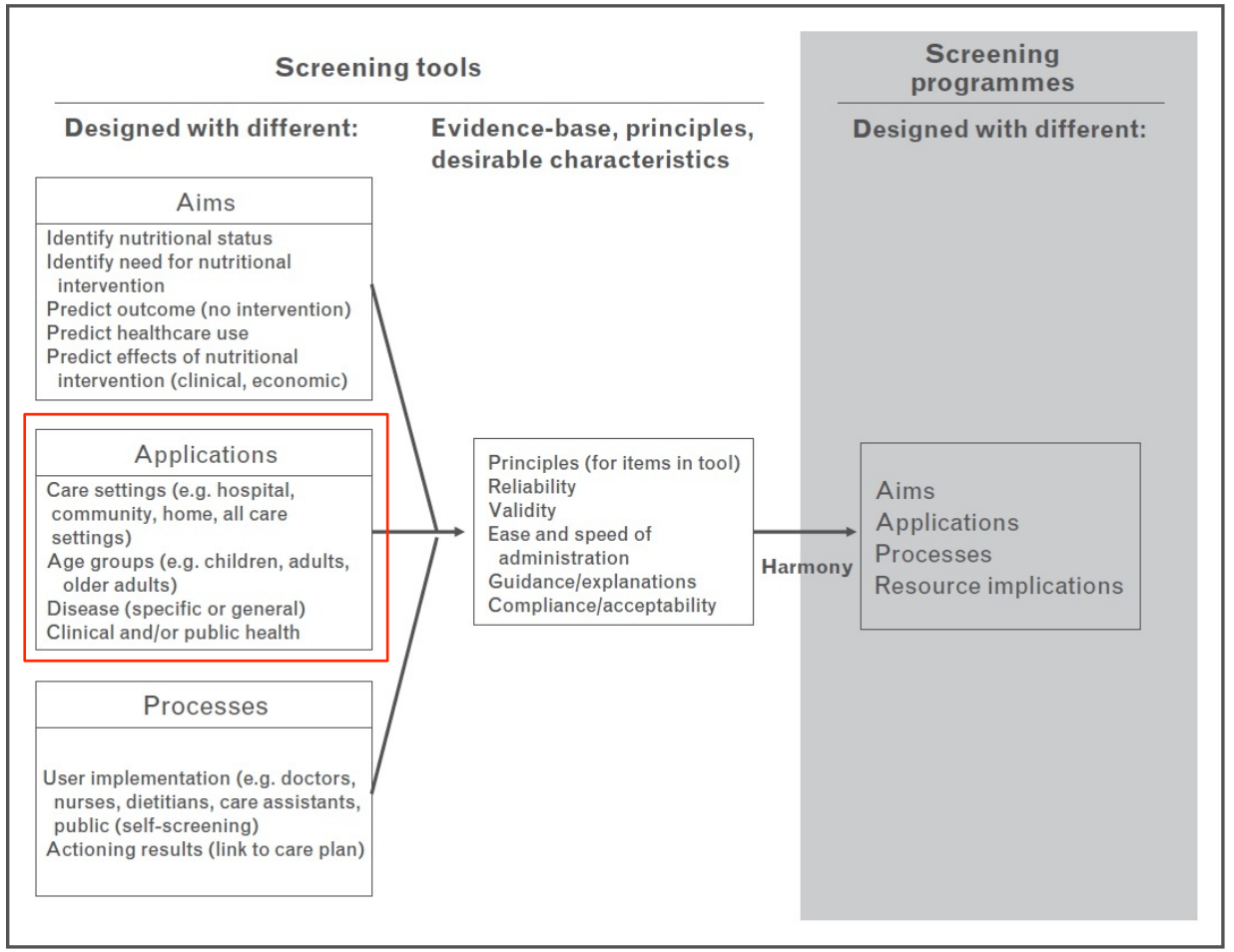
More than 3 million individuals are estimated to be at risk of malnutrition in the UK, of whom about 93% live in the community. BAPEN's Nutrition Screening Week surveys using criteria based on the 'Malnutrition Universal Screening Tool' ('MUST') revealed that 28% of individuals on admission to hospital and 30–40% of those admitted to care homes in the previous 6 months were malnourished (medium + high risk using 'MUST'). About three quarters of hospital admissions and about a third of care home admissions came from their own homes with a malnutrition prevalence of 24% in each case. Outpatient studies using 'MUST' showed that 16–20% patients were malnourished and these were associated with more hospital admissions and longer length of stay. In sheltered housing, 10–14% of the tenants were found to be malnourished, with an overall estimated absolute prevalence of malnutrition which exceeded that in hospitals. In all cases, the majority of subjects were at high risk of malnutrition. These studies have helped establish the magnitude of the malnutrition problem in the UK and identified the need for integrated strategies between and within care settings. While hospitals provide a good opportunity to identify malnourished patients among more than 10 million patients admitted there annually and the five- to six-fold greater number attending outpatient departments, commissioners and providers of healthcare services should be aware that much of the malnutrition present in the UK originates in the community before admission to hospitals or care homes or attendance at outpatient clinics.

Applications/2. age



Elia M & Stratton R. *Curr Opin Clin Nutr Metab Care* 2011; **14**:425-433.

Applications/3. disease



Elia M & Stratton R. *Curr Opin Clin Nutr Metab Care* 2011; **14**:425-433.

Applications/3. disease

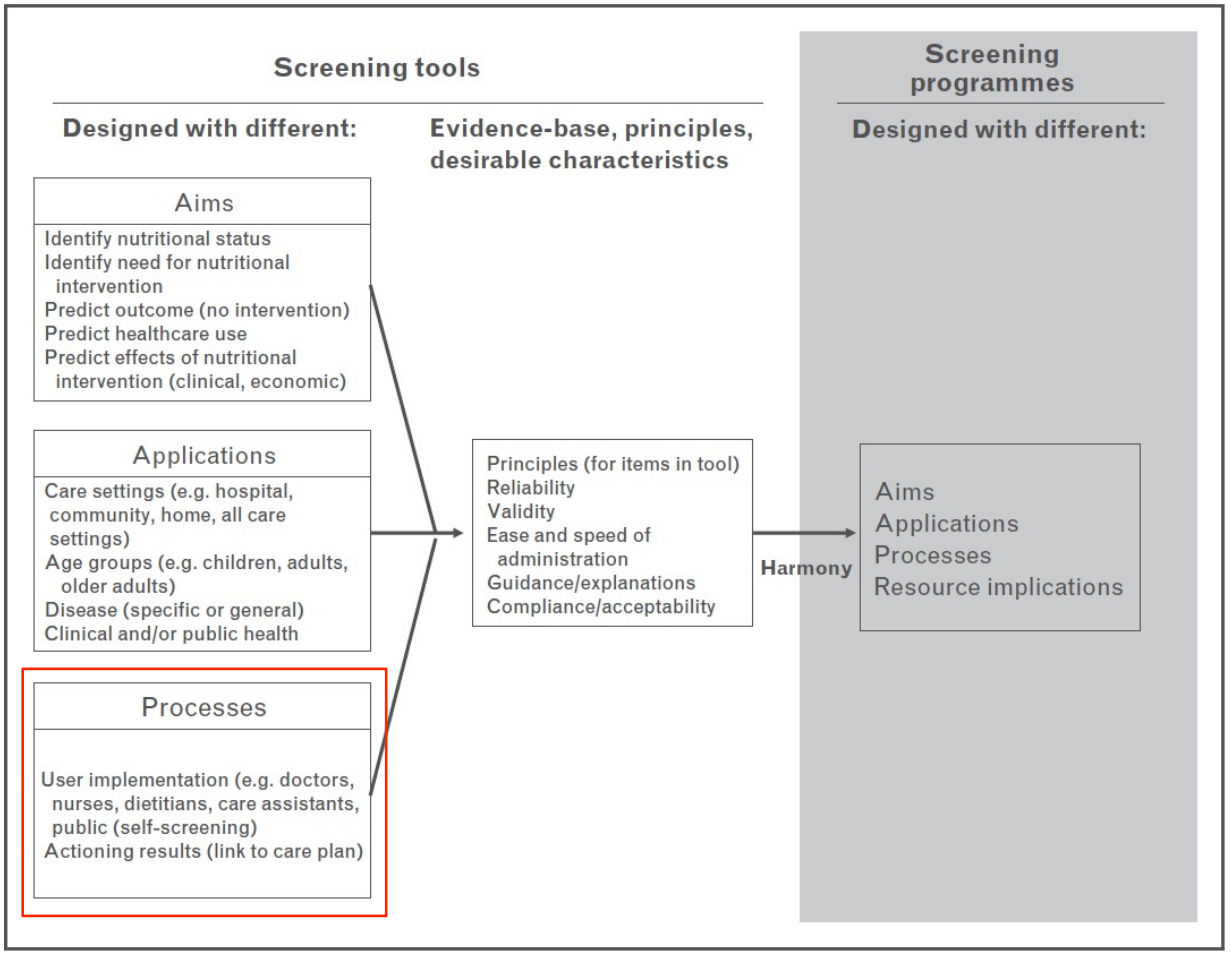
- L'uso di strumenti di screening malattia-specifici *nello stesso contesto* può essere problematico ma giustificato quando se ne ottenga un vantaggio applicativo

- (Tale vantaggio è difficilmente ipotizzabile a livello di Comunità.)

Applications/4. Clinic & Public Health

- Pochi strumenti sono utilizzabili in entrambi i contesti e quello attualmente più validato è il MUST

Un framework per scegliere



Elia M & Stratton R. *Curr Opin Clin Nutr Metab Care* 2011; **14**:425-433.

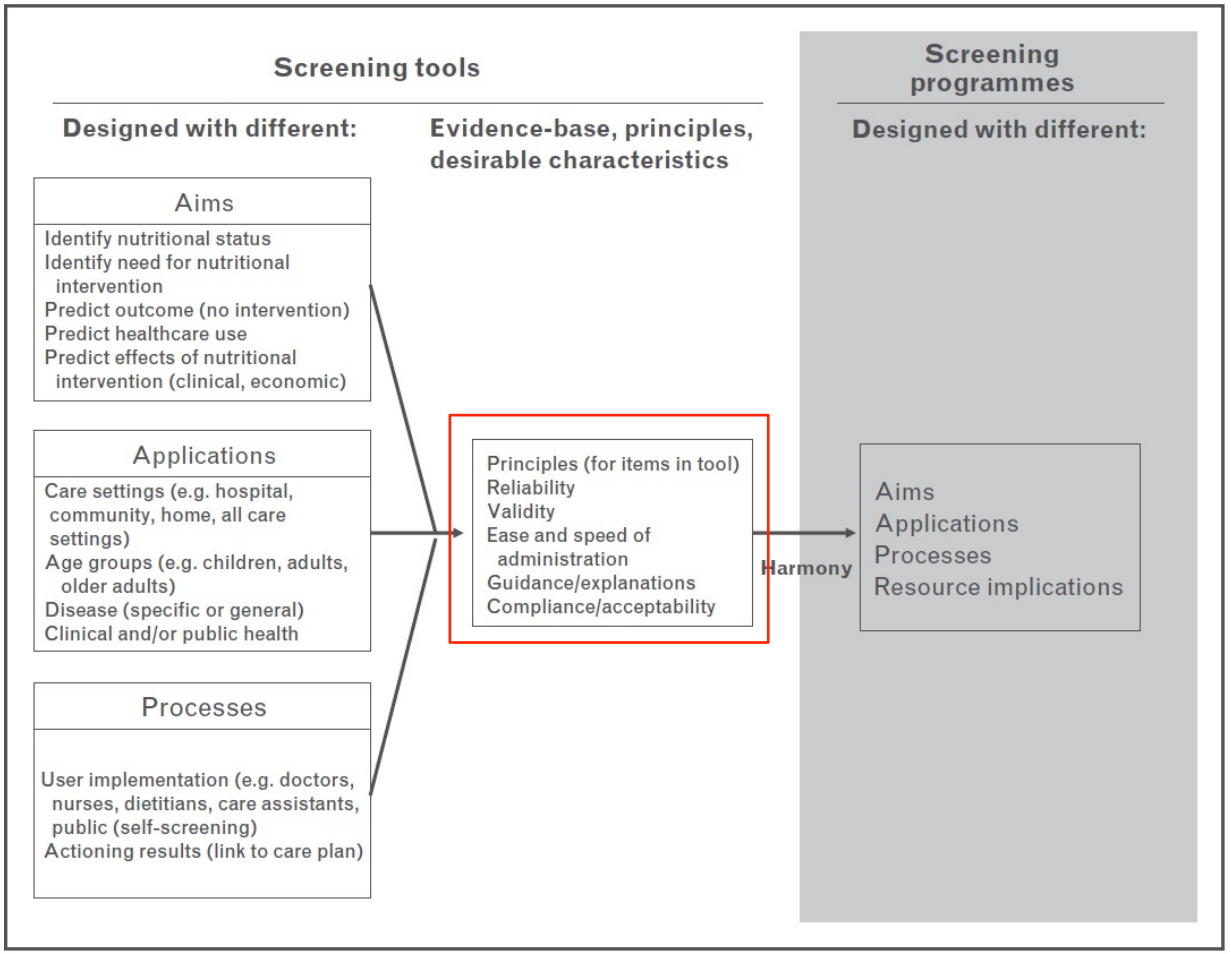
Processes / 1.User

- Medico
- Dietista
- Infermiere
- Altro operatore
- Autosomministrazione (?)

Processes / 2. Action

- Fondamentale per l'uso clinico-assistenziale
- Meno importante per l'uso "puramente" epidemiologico

Un framework per scegliere



Elia M & Stratton R. *Curr Opin Clin Nutr Metab Care* 2011; **14**:425-433.

Alcune caratteristiche da valutare

- Ripetibilità (“reliability”)
- Validità (“validity”)
  - Validità concorrente (“concurrent validity”)
  - Validità predittiva (“predictive validity”)
  - …
- Applicabilità

Alcune caratteristiche da valutare

Table 1 Reliability (inter-rater agreement when using the same screening procedure on the same patient) and correlational (concurrent) validity (agreement between different screening procedures in the same patients) of selected screening tools

	κ-Values[a]
Reliability	
SGA	0.72 [39], 0.784 (mean of 0.60, 0.81, and 1.0) [41], 0.570 [31], 0.66 [49], 0.56 [50]
MUST	0.801–1.000 (8 studies) [12]
NRS-2002	(0.67)[b] [56], 0.47 (mean of 0.41, 0.52 and 0.48) [51]
MNA[c]	0.51 [52], 1.00 [53]
SNAQ	0.69, 0.91 [54]
Correlational (concurrent) validity	
MUST vs. SGA	0.635 [57], 0.26 [58], 0.783 [59], 0.800 [60], 0.90 [61]
NRS-2001 vs. SGA	0.620 [57], 0.48 [58], 0.685 [62], 0.56 [63], 0.39 [61], 0.55 [53]
MNA_{SF} vs. SGA	0.491 [57]
MUST vs. MNA_{SF}	0.388 [57], 0.605, 0.551 [59]
NRS-2002 vs. MNA_{SF}	0.382 [57], 0.230 [64]
MUST vs. NRS-2002	0.502 [57], 0.80 [61], 0.64 [65], 0.519 [64]
MUST vs. dietitian	0.898[d] [66]
MNA_{SF} vs. dietitian	0.534[d] [66]

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Alcune caratteristiche da valutare

Table 2 Time taken to administer screening tools

Tool or study	Time to administer tool (min)
MNA^{FULL}	<10 min [76], <15 min [4,56] <~15 min [5], <over 30 min [78]
MNA^{SF}	4–5 min [64], 5 min [59]
MUST	<2 min [64], 3–5 min [59]
NRS-2002	2–3 min [64]
SGA	5–10 min [59]
Modified forms of SGA	2 [35], <12 (5–20) min [33]
Other tools	5–15 min
Comparison in same study	
Raslan *et al.* [64]	MUST (<2 min) < NRS (2–3 min) <MNA^{SF} (4–5 min)
Stratton *et al.* [59]	MUST (3–5 min), <MNA^{SF} (5 min) <SGA (5–10 min)

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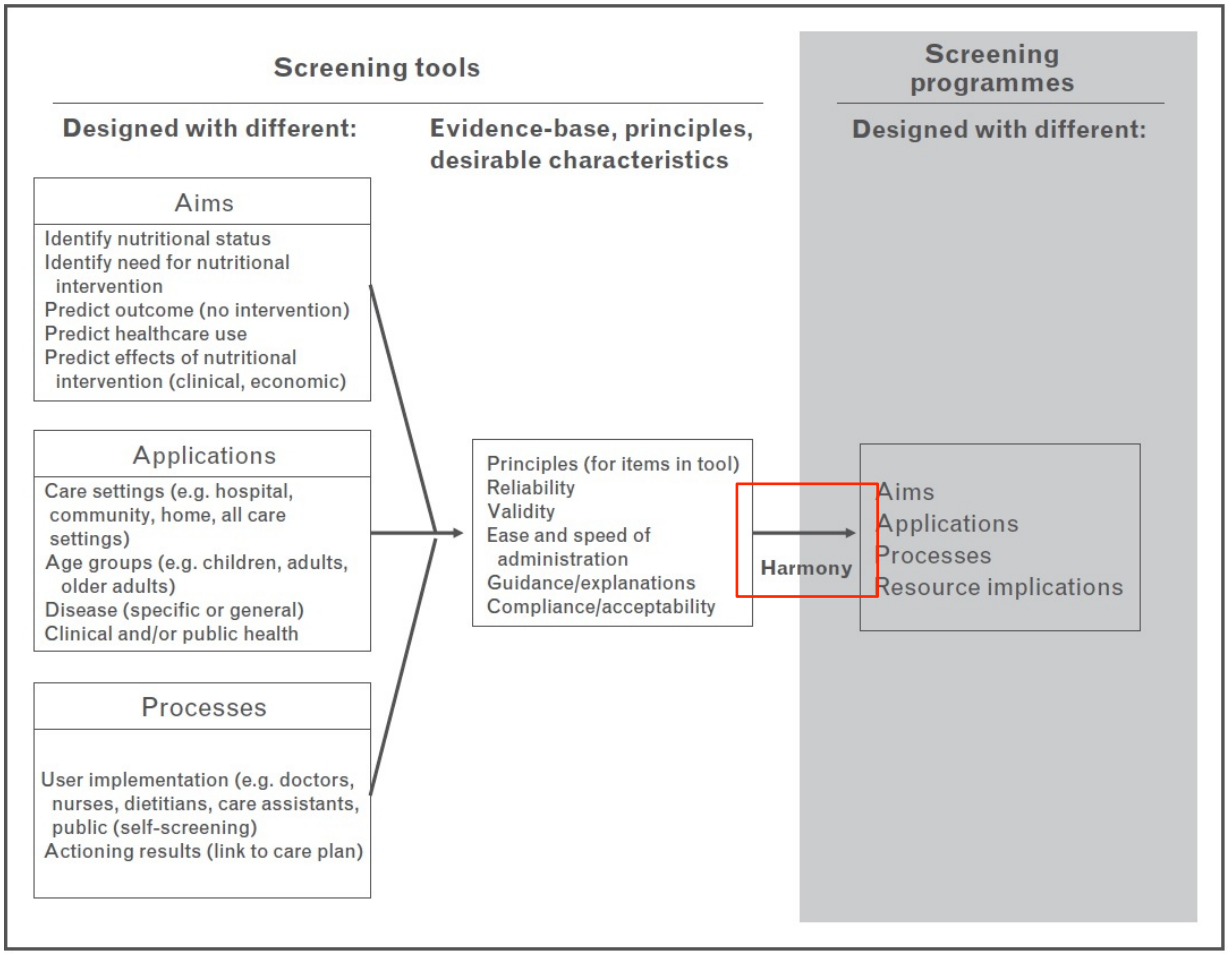
Problemi aperti

- Come è possibile scegliere tra strumenti sviluppati tenendo in considerazione differenti outcome?

- Quanto è corretto confrontarli tra loro assumendo un "gold-standard" che di fatto non esiste?

- Vogliamo utilizzare il test in senso prognostico (mortalità, qualità della vita, lunghezza della degenza, complicazioni ecc.) o per guidare l'intervento nutrizionale?

Un framework per scegliere



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MUST

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'MUST'

- The 'MUST' Toolkit
- The 'MUST' Itself
- The 'MUST' Explanatory Booklet
- The 'MUST' Report
- FAQ Document
- Screening is a 'MUST' - Practical Workshop
- 'MUST' Tape Measure
- The 'MUST' Report - 10 Key Points
- E-learning Resources on Nutritional Screening for Hospitals and the Community
- Guidance on adapting 'MUST' – what you must not do! (PDF)
- 'MUST' Calculator
- The 'MUST' App

The 'MUST' Toolkit

Now Available:

The 'MUST' App for the iPhone!

BAPEN and its Standing Committee the Malnutrition Action Group (MAG) acknowledges the support of the British Dietetic Association (BDA), the Royal College of Nursing (RCN) and the Registered Nursing Home Association RNHA) in the development and dissemination of 'MUST'.

MUST

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THE 'MUST' EXPLANATORY BOOKLET

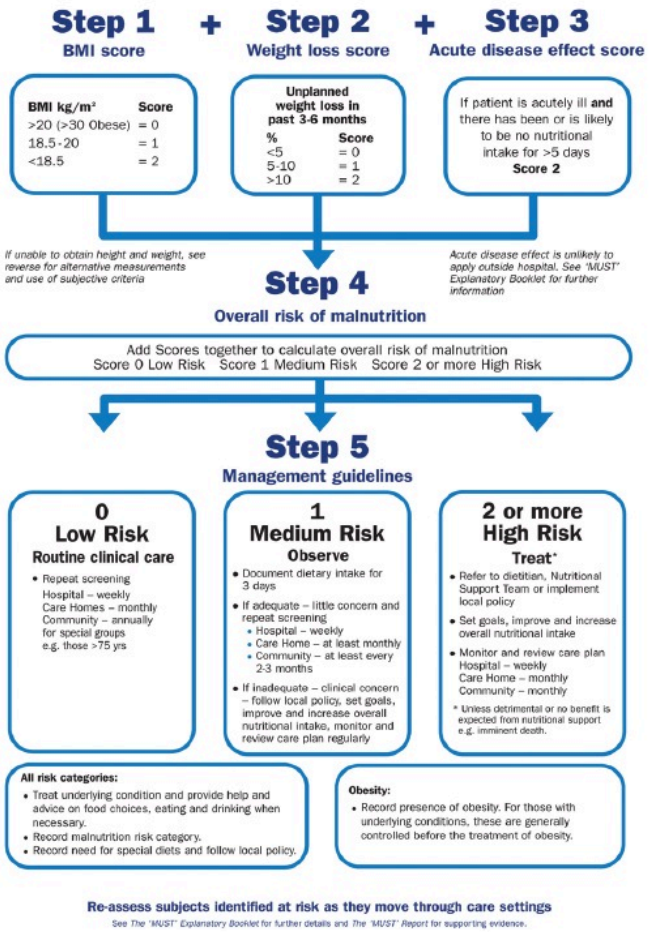
A Guide to the
'Malnutrition Universal Screening Tool' ('MUST')
for Adults

MAG

Malnutrition Action Group
A Standing Committee of BAPEN

Edited on behalf of MAG by
Vera Todorovic, Christine Russell and Marinos Elia

MUST


Step 1
BMI score
+
Step 2
Weight loss score
+
Step 3
Acute disease effect score
BMI kg/m²
Score
>20 (>30 Obese) = 0
18.5-20 = 1
<18.5 = 2
Unplanned weight loss in past 3-6 months
%
Score
<5 = 0
5-10 = 1
>10 = 2
If patient is acutely ill and there has been or is likely to be no nutritional intake for >5 days
Score 2
If unable to obtain height and weight, see reverse for alternative measurements and use of subjective criteria
Acute disease effect is unlikely to apply outside hospital. See 'MUST' Explanatory Booklet for further information
Step 4
Overall risk of malnutrition
Add Scores together to calculate overall risk of malnutrition
Score 0 Low Risk Score 1 Medium Risk Score 2 or more High Risk
Step 5
Management guidelines
0
Low Risk
Routine clinical care
• Repeat screening
Hospital – weekly
Care Homes – monthly
Community – annually
for special groups
e.g. those >75 yrs
1
Medium Risk
Observe
• Document dietary intake for 3 days
• If adequate – little concern and repeat screening
• Hospital – weekly
• Care Home – at least monthly
• Community – at least every 2-3 months
• If inadequate – clinical concern – follow local policy, set goals, improve and increase overall nutritional intake, monitor and review care plan regularly
2 or more
High Risk
Treat*
• Refer to dietitian, Nutritional Support Team or implement local policy
• Set goals, improve and increase overall nutritional intake
• Monitor and review care plan
Hospital – weekly
Care Home – monthly
Community – monthly
* Unless detrimental or no benefit is expected from nutritional support e.g. imminent death.
All risk categories:
• Treat underlying condition and provide help and advice on food choices, eating and drinking when necessary.
• Record malnutrition risk category.
• Record need for special diets and follow local policy.
Obesity:
• Record presence of obesity. For those with underlying conditions, these are generally controlled before the treatment of obesity.
Re-assess subjects identified at risk as they move through care settings
See The 'MUST' Explanatory Booklet for further details and The 'MUST' Report for supporting evidence.

MUST

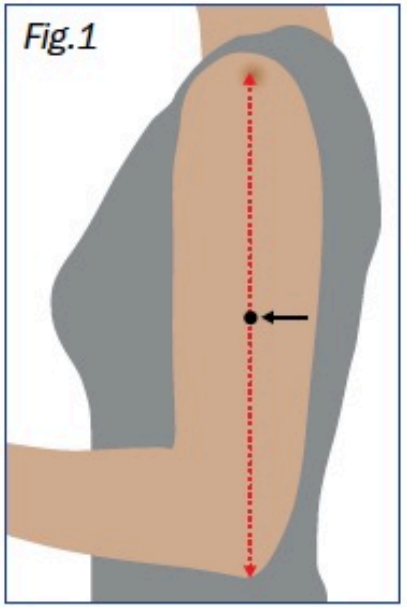
Estimating body mass index (BMI) category

If neither height nor weight can be measured or obtained, a likely BMI range can be estimated using the mid upper arm circumference (MUAC) which may be used to support an overall impression of the subject's risk category using subjective criteria (see page 7).

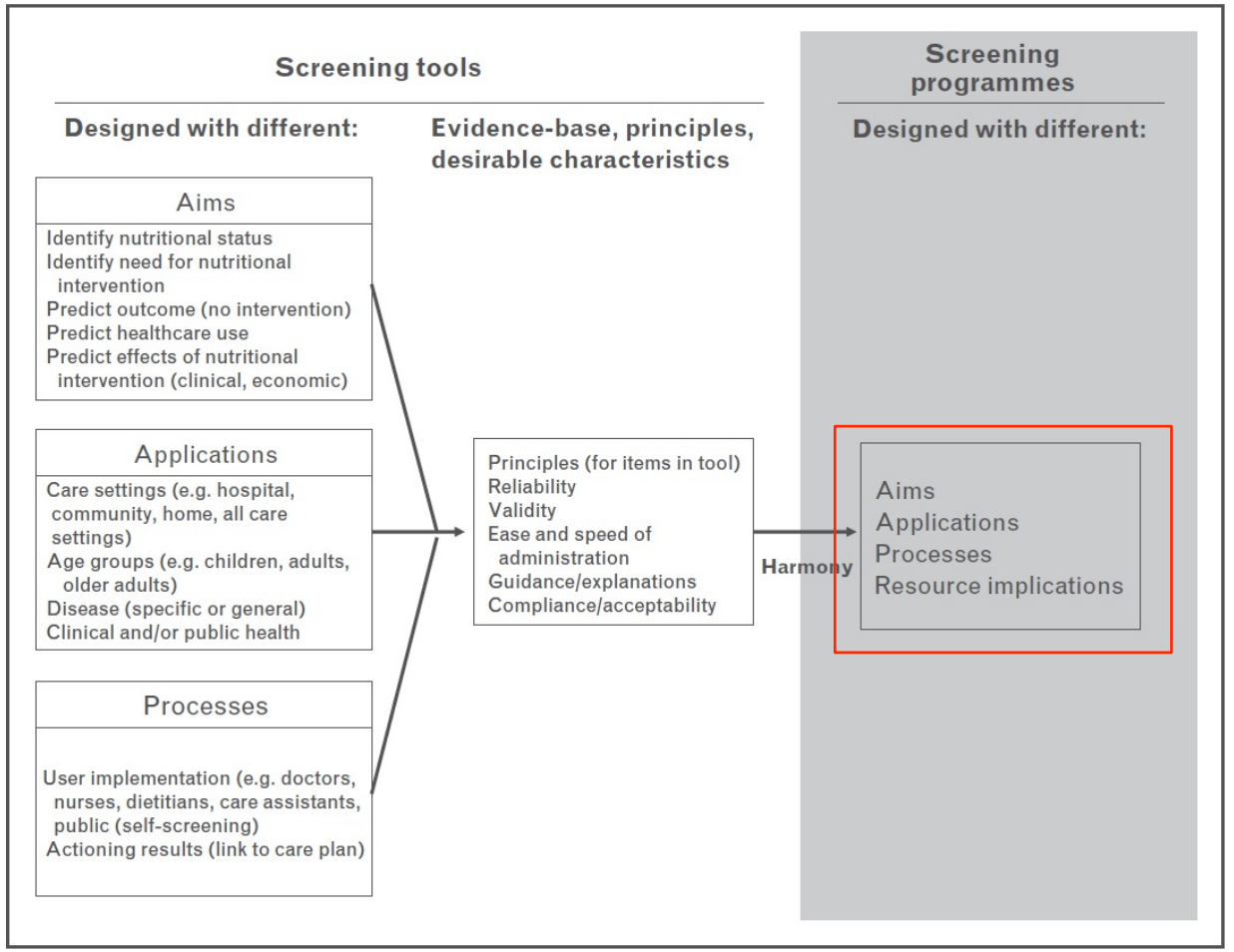
Please note, use of MUAC is not designed to generate a score

Measuring mid upper arm circumference (MUAC)
See Fig.1

- The subject should be standing or sitting.
- Use left arm if possible and ask subject to remove clothing so arm is bare.
- Locate the top of the shoulder (acromion) and the point of the elbow (olecranon process).
- Measure the distance between the 2 points, identify the mid point and mark on the arm.



Per concludere



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Grazie