IAMSE Webinar
Global challenges and Solu7ons in Health Professions Educa7on

Challenges and Opportuni7es for Medical Schools in Africa

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Africa – large and complex

- ~ 54 countries
- ~1500–2000 languages
- Wide spectrum of cultures, geographies, economies, historical legacies
- Challenges & opportuniAes for health professional educaAon?

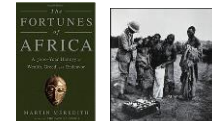
Colonialist Legacies of Africa

"The only excuse for colonizaBon is medicine…The one thing that "…ennobles and jusBfies the [brutality of colonizaBon]…is the acBon of the doctor." (Lyautey)

French Marshall Lyautey
1854–1934

"It is no accident that the redefiniBon of public health and biomedicine as scienBfic professions coincided with the moment at which European powers began to build empires."

Greene, J et al. "Colonial Medicine and its legacies' in Reimagining Global Health, 2013



Is 'Colonialism' sAll seTng the agenda?

"Knowledge frameworks carried forward from colonial Bmes conBnue to influence both who is invited to the policymaking table and how global health agendas are then prioriBzed."

Greene J, *Colonial Medicine and its Legacies*, 2011

Rise and Impact of **"Global Health"** on science and medicine in Africa

"Global Health" & Medical EducaAon?

- Jim Kim 2011 AAMC –Pres World Bank, (PIH)
- Medical schools should drive "global health:"
  1. Medical schools are the upstream training ground for doctors
  2. Medical schools have added access to mulAple disciplines in universiAes that add value to global health

"Global Health" & the New Scramble for Africa

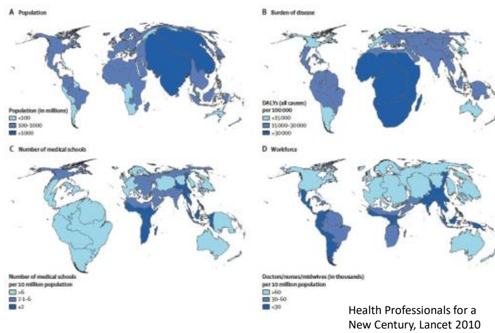
"The awkward relaBonship between science and development is…a defining characterisBc of global health research. Since the waning of the colonial era in the second half of the twenBeth century, relaBons between African naBons and "the West" have been increasingly defined by the poliBcs of aid and development, in which North American and European countries serve as "donors" to impoverished, formerly colonized "client" naBons."

'Western' medical educaAon as 'unwiTng (re)colonizers?'

"What does it mean to be a medical educator who may unwiXngly be colonizing an 'Other' with patently Western ideals and pracBces, a rhetorical tacBc that serves also to construct the idenBty of the colonizer."

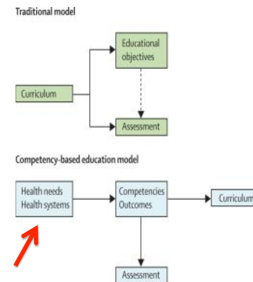
Health Professionals for a New Century –

transforming educaAon to strengthen health systems in an interdependent world



Health Professionals for a New Century, Lancet 2010

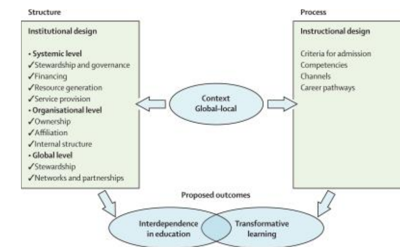
'Health and Systems Needs' VS 'outdated staAc curricula'



"…a slow-burning crisis is emerging in the mismatch of professional competencies to patient and population priorities because of fragmentary, outdated, and static curricula producing ill-equipped graduates for underfinanced institutions."

(Frenk et al., LANCET 2010)

'Interdependence--Context--TransformaAon'



Frenk et al., LANCET 2010

Contexts: Global VS Local?

- *AdaptaBon locally but harnessing of resources globally in a way that confers capacity to flexibly address local challenges while using global knowledge, experience, and share resources… (Frenk et al. Lancet 2010)*
- *"Global policies can be helpful in offering strategies and standards for care delivery, but they must be adapted to local context to minimize unintended negaBve consequences …"*
  (Bleakley, Bligh and Brown 2011)

"Interdependence =

from **'isolated silos'** to **"networks, alliances & consor7a"**

(Lancetl. 2010)

"Laudable efforts to address these deficiencies have mostly floundered because of the so–called tribalism of the professions – ie the tendency of the various professions to act in isolaBon from or even in compeBBon with each other."

Shif from isolated to harmonized educaAon and health systems…grom stand–alone insAtuAons to **networks, alliances and consor7a**

"Networks, alliances and consorBa.."

"Global Networks, Alliances and Consortia" in Global Health Education—The Case for South-to-South Partnerships

Quentin Eichbaum, MD, PhD, MPH, MFA, FCAP,†‡ Peter Nyarango, PhD,§ Kasonde Bowa, MB BCh, MSc, MMed, DPH,|| Philip Odonkor, MB ChB, PhD,§ Jorge Ferrão, PhD,¶ Yohana Mashalla, MD, PhD,# Olli Vainio, MD, PhD,**†† and Sten H. Vermund, MD, PhD†‡‡*

Eichbaum et al. – JAIDS, 61(3), 2012

Medical EducaAon Partnership IniAaAve

MEPI 2010–2015 –

capacitaAon of medical educaAon in Africa

MEPI transiAons into AFREhealth

Accra Ghana June 2017

MEPI

NEWSLETTERS WEBINARS HOME ABOUT MEPI LIBRARY SYMPOSIA

2017 AFREHEALTH SYMPOSIUM

2017 Call for Abstracts

SYMPOSIUM ANNOUNCEMENT

The AFREhealth 2017 Symposium 1st- 3rd August 2017

Venue: Ghana College of Physicians and Surgeons, Accra, Ghana

Theme: "Leadership and Capacity building for Health Professions Education and Research in Africa."

CUGH -Largest academic global health organizaAon in world – EducaAon/Research

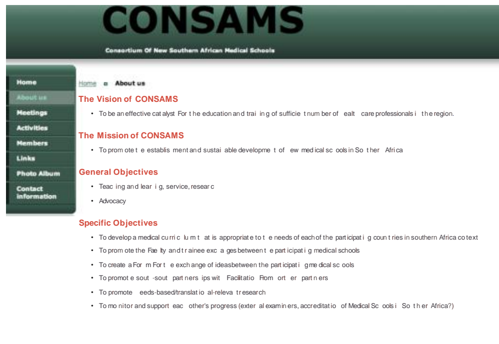
-165 universiAes, > +30 000-individual network

AFREhealth--CUGH collabora%ve Working Group (2017)

Regional African EducaAon ConsorAa

MEDICAL EDUCATION FOR EQUITABLE SERVICES TO ALL UGANDANS (MESAU)

A Medical Education Partnership Initiative (MEPI)



ProliferaAon of New Medical Schools

+100 new medical schools to open in Africa over next 10y!

Rural Community Programs

eg Namibia; & *'One-student-one-Family'* (UniLurio, Moz)

Resource applicaAons

FULL CAST AND CREW | TRIVIA | USER REVIEWS | IMDbPro | MORE | SHARE

A Doctor of My Own: The First Medical Students of Namibia (2014)

9.4

51min | Documentary, History, News | 11 May 2014 (USA)

1:38 | Trailer

Acco ding to the WHO, S b-Sahar a Afr ica carries 2 % of the wo rld's bu den of disease, but 3% oft e healt -care work orce. Within the ext decade, 100 medica l schools wi ll open across ... See full sum ary

Director: Tris a Pasric a

St r : J lio Frenk , Quentin Eic baum , Philip Odo ker

Challenges facing (New) Medical Schools in Africa

1. **Standards/accredita7on**
2. Admissions
3. Assessment and EvaluaAon
4. Curriculum

WanAng to conform to 'Western' standards

- *"Nervousness about not being seen to conform to Western educaBonal imperaBves permeates…. [African] medical educaBon…."*
- *"…medical educaBonal strategies cannot be cooked up in [Western] UniversiBes and then exported. They must be **context specific** and fit the purpose, formulated in the heat of pracBce."*

ExporAng (franchising?) Western Standards

Thinking the post-colonial in medical education
Alan Bleakley, Julie Brice & John Bligh
Medical EducaAon, 2008

"At its extreme, this emphasis on standardizing risks echoing the homogenizing process of Western–inspired 'McDonaldisaBon.' In this case, however, what is being traded in the global marketplace is knowledge rather than hamburgers."

Admissions

Admissions – challenges

- Most African schools follow the European medical educaAon system
  - Admission straight afer high school -5-7year degree>internship>MMED
  - Elite private VS poor public high schools – biased merit-based admissions
  - Narrow admissions criteria – exam results
  - Ofen lack standardized school tesAng and/or entrance exams
- M.O.H pressure on schools to admit & graduate more physicians
- Power influences over admissions process
- Rise of private medical schools viewed by some with suspicion

Admissions – alternate models

1. Quota system – University of Namibia SoM
   - Each region designated a quota of students admiued
   - More equitable?
   - Evidence rural students more likely to return to rural pracAce
2. Lower admissions criteria for some/all students?
   - Provide free rigorous academic support of a year or more (S.Africa)
   - Self paced learning; allows catch-up >equitable
3. 'Farming out' some admiued students to other schools/ countries – SA, Lesotho, Sudan…

Assessment and Evalua7on

Assessment and EvaluaAon

- May lack experAse and/or resources in assessment/evaluaAon methods (especially new medical schools).
- OpAons
  1. Apply locally-developed tools/resources
  2. Use online resources
  3. **Develop regional "external examiner" system (CONSAMS)**
  4. InternaAonal accreditaAon standards
- InternaAonal examinaAon examples:
  - NBME eg pilot of the IFOM in Namibia (other CONSAMS schools);
  - OSMOSIS (offered to CONSAMS)
  - Others: COURSERA; KAHN; NextgenU -a plethora?

Curriculum

"Fragmentary, outdated, staBc Curricula…"
(Frenk et al., LANCET 2010)

"…a slow-burning crisis is emerging in the mismatch of professional competencies to patient and population priorities because of fragmentary, outdated, and static curricula producing ill-equipped graduates for underfinanced institutions."

The conceit of curriculum

Cynthia Whitehead, Ayelet Kuper & Fiona Webster
Medical EducaAon 2012

"Arrogance about our potenBal to shape our health systems through our curriculum will not serve us well….The suggesBon that medical educaBon can fix society diverts aeenBon from structural societal inequaliBes…We must take care not to suggest that the ills of society can be cured by medical curricula. "

Curricula Outdate #1

Theore7cal knowledge must precede applied medical prac7ce?

*"Medical educaBon must conBnue to address (and redress) the primary historical symptom of the Flexner legacy – **the disjunc%on between the pre–clinical and clinical years, reflected in the outdated no%ons that theory must precede prac%ce and the abstract must precede the applied**. Rather, we call for early and intensive paBent contact with integrated theory and pracBce informed by contemporary socio–cultural learning theory centered on workplace pracBce."* [Bleakley, Bligh, Brown, 2011]

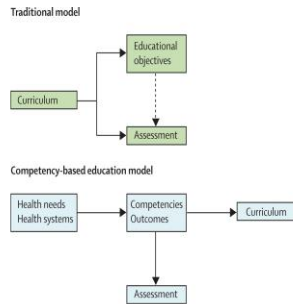
Curriculum Outdate #2

Doctor--centered hierarchies VS pa7ent--centered

"…despite 30 years' worth of research–led development in teaching and learning communicaBon in medicine, doctors in general communicate poorly and remain doctor--centered rather than paBent centered" (Roter and Hall, 2006)

Competency--based educaAon

(Frenk et al., LANCET 2010)



COMPETENCY BASED MEDICAL EDUCATION

Challenging a 'Western' EducaAonal Concept in Global Contexts

Controversies with Competencies in Global health

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www.cugh.org
@CUGHnews

Competencies in Global Health EducaAon

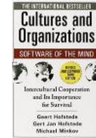
The Problem With Competencies in Global Health Education
Eichbaum, Quentin MD, PhD, MPH, MFA, MMHC
Academic Medicine: April 2015 - Volume 90 - Issue 4 - p 414–417

Acquired and Participatory Competencies in Health Professions Education: Definition and Assessment in Global Health
Eichbaum, Quentin MD, PhD, MPH, MFA, MMHC
Academic Medicine: April 2017 - Volume 92 - Issue 4 - p 468–474

The problems....

1. Insufficiently **inclusive** of input from LMICs/global south
   – Ofen developed self--interestedly by commiuee in HIC programs
2. Insufficiently **context** specific
   – Generic - to be 'conveniently' transferable across contexts
3. Unresolved **"individualist/collec7vist disjunc7on"**
   – HICs vs LMIC cultural/learning differences
4. Inadequate **assessment** methods

Individualist--CollecAvist DisjuncAon



- **INDIVIDUALIST - high income countries (HIC)**
  – USA, European, Australia, NZ...(global north)
  – Understand themselves through individual achievement
  – Intrinsically compeAAve
  – Learning is "acquired and possessed" by the individual
  – Learning is transferable across contexts
- **COLLECTIVIST - low--and middle income countries (LMICs)**
  – Developing countries (global south)
  – Understand themselves in terms of group they below to
  – Intrinsically parAcipatory, collaboraAve, place group's wishes over own
  – Learning is "situated/distributed" within and arises through parAcipaAon and from dynamic social interacAon
  – Learning is context--dependent and not fully transferable across contexts

Contexts – free or linked?

- **If context--free**
  – Competent pracAAoner is "generally competent"
  – Competencies can be taught and pracAced independent of the parAculariAes of the context
  – Competency in one context predicts competence in others
- **If context--linked**
  – PracAAoner is competent with respect to specific contexts
  – Competency MUST be linked & taught with respect to context
  – Competence in one context does NOT predict competence in others

Assessment – shortcomings in LMICs

Low resource seTngs....

1. **Inadequate direct observa7on (eg Holmboe, 2014)**
   – Lack of faculty, over– crowded hospitals, clinics
2. **Lack a frame or reference to assess HIC trainees**
   – What are they expected to know?
   – How should they compare alongside local trainees?
   – How to assess visiAng HIC trainees alongside local trainees'?

Assessment – shortcomings in LMICs

3. **Inadequacy of "checkbox" format**
   – Convenient but mechanisAc
   – Can lead to overconfidence
4. **Inadequate intrinsic "competence" of LMICs seangs**
   – Concept of competency training inadequately developed
   – Competence of specific training environment affected trainee's subsequent competence. Corraccio & Englander; Asch (2009) expt
5. **Lack of con7nuing educa7on (CME) to maintain competency**
   – Competency wanes over Ame
   – SeTngs in LMIC can change quickly – epidemiology, sociopoliAcal – so competency needs adjustment

Acquired & ParAcipatory Competencies

- **Acquired Competency**
  - Knowledge & skills
  - Ophthalmology – Medical Knowledge
    - *"Must demonstrate competencies in their knowledge of cataract surgery, contact lenses, corneal and external disease, eye abnormaliBes, glaucoma..."* (ACGME –IV.A.5.b)
- **Par7cipatory Competency**
  - CommunicaAon, collaboraAon etc
  - Ophthalmology – Interpersonal and CommunicaAons Skills
    - *"...communicate effecBvely with paBents, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds."* (ACGME – IV.A.5.d)

MEPI/PEPFAR 2014 conference – Maputo, Mozambique

Can interpret viral loads and CD4 counts in paAents with HIV/AIDS.

Counsel a dying paAent.

Acquired vs ParAcipatory competencies

Competency Domains of four major global/public health organiza7ons

Association of Schools of Public Health (ASPH) – Global Health Competency Model (Final Version 1.1) (2011) [19]	World health Organization (WHO) Global Competency Model [20]	Consortium of Universities for Global Health (CUGH) – competency domains for initial Competency Ranking [21]	Joint US/Canadian Committee on Global Health Core Competencies 2008-2009 [22]
1. Capacity Strengthening	1. Communicating in a credible and effective way	1. Global burden of disease	1. Global burden of disease
2. Collaborating and Partnering	2. Knowing and managing yourself	2. Globalization of health and healthcare	2. Health implications of travel, migration and displacement
3. Ethical and Professional Practice	3. Producing results	3. Social and Environmental Determinants of Health	3. Social and economic determinants of health
4. Health Equity and Social Justice	4. Moving forward in a changing environment	4. Capacity strengthening	4. Population, resources and environment
5. Program Management	5. Fostering integration and teamwork	5. Teamwork/collaboration and communication	5. Globalization of health and healthcare
6. Socio-cultural and Political Awareness	6. Respecting and promoting individual and cultural differences	6. Ethical reasoning	6. Healthcare in low-resource settings
7. Strategic Analysis	7. Setting examples	7. Professional practice	7. Human rights and global health
		8. Health equity and social justice	
		9. Program management	
		10. Social, cultural and political awareness	
		11. Strategic analysis	
		12. Communication	

ParAcipatory Competencies -assessment

- Not amenable to standard observaAonal/psychometric methods
- Require mulAdimensional approach involving input from other co--assessing healthcare teams/individuals including trainee – not just single preceptor!
- Use qualitaAve and mixed methods from social sciences
  - Self--directed
  - NarraAve
  - Ethnographic
  - Realist enquiry
  - other

Self--Directed Assessment Seeking

Eva and Regehr (2008)

- Trainee proacAvely seeks feedback and assessment from a range of relevant sources (being empowered by faculty, system) and translates this feedback into improving performance.
- CollecAvely involve peers, teachers, other sources of info
  - More reliable than single assessor (Moonen van Loon et al, 2015)
- CollecAvist seTngs > aligns with "Transprofessionalism" (Lancet 2010) to include ancillary health workers in low resource seTngs

SUMMARY

1. Competencies may be **context--free or context--linked**
2. Some competencies may be individually "acquired" as knowledge/skills and transferred across contexts, but others (most?) are situated in dynamic social seTngs, linked to contexts, and are learned through "parAcipaAon."
3. *Acquired* and *parBcipatory* competencies require different methods of assessment – more work on assessing parAcipatory competencies
4. Need more inclusive processes (global south) & more nuanced classificaAon of competencies

Part 2

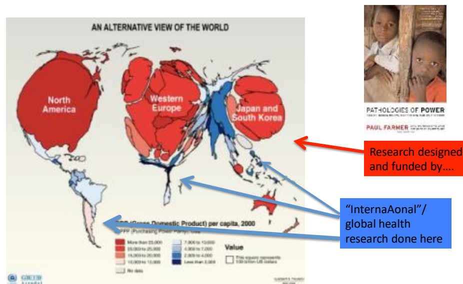
Corollary topics

(If Ame permits –
or skip to **Conclusions**)

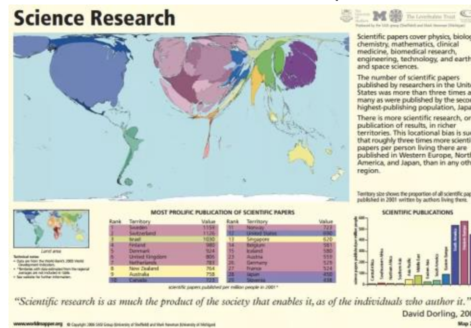
1. Challenges of Research Ethics and CapacitaAon

Good science = Good ethics

The HIC–LMIC Power Differen7al



Where is science research published?



PublicaAon & Research CapacitaAon?

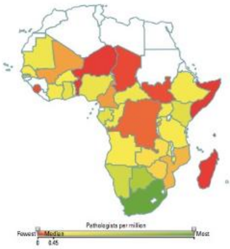
RESEARCH ARTICLE

Improving Decision Making for Massive Transfusions in a Resource Poor Setting: A Preliminary Study in Kenya

Elisabeth D. Riviello[1]*, Stephen Letchford[2], Earl Francis Cook[3], Aaron B. Waxman[1], Thomas Gaziano[3,4]

1 Department of Medicine, Division of Pulmonary and Critical Care Medicine, Brigham and Women's Hospital, Boston, Massachusetts, United States of America, 2 Africa Inland Church Kijabe Hospital, Kijabe, Kenya, 3 Harvard School of Public Health, Boston, Massachusetts, United States of America, 4 Department of Medicine, Division of Cardiovascular Medicine, Brigham and Women's Hospital, Boston, Massachusetts, United States of America

Clinical CapacitaAon
Eg: Pathology in Africa



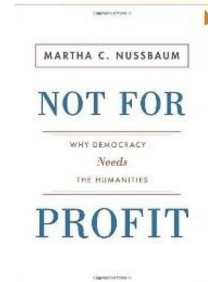
Country	Population (No.)	No. of Persons per Pathologist	Pathologists
Angola	24,906,000	2,075,500	12
Benin	10,507,000	NA	0
Botswana	2,156,000	359,333	6
Burkina Faso	18,184,000	2,273,000	8
Burundi	9,684,000	3,228,000	3
Cameroon	21,636,000	3,606,000	6
Central African Republic	5,462,000	1,365,500	4
Chad	13,439,000	6,719,500	2
Cote d'Ivoire	24,026,000	1,601,733	15
Democratic Republic of Congo	74,061,000	4,936,733	15
Ethiopia	89,060,000	1,619,273	55
Gabon	2,337,000	779,000	3
Ghana	27,379,000	912,633	30
Kenya	43,554,000	725,967	60
Madagascar	22,747,000	NA	
Malawi	16,056,000	1,784,000	9
Mali	17,512,000	3,502,400	5
Mauritania	3,716,000	1,238,667	3
Mauritius	1,262,000	84,133	15
Mozambique	25,392,000	3,174,000	8
Namibia	2,217,000	554,250	4
Niger	16,529,000	8,264,500	2
Nigeria	182,336,000	1,072,565	170
Republic of Congo	4,638,000	1,546,000	3
Rwanda	11,180,000	2,236,000	5
Senegal	13,950,000	1,992,857	7
Sierra Leone	6,432,000	6,432,000	1
South Africa	54,425,000	224,897	242
South Sudan	12,165,000	6,082,500	2
Tanzania	48,126,000	2,187,545	22
Togo	6,967,000	2,322,333	3
Uganda	35,225,000	1,467,708	24
Zambia	15,254,000	2,542,333	6
Zimbabwe	13,426,000	2,685,200	5

2. Science VS HumaniAes?

Relevance of humaniAes to medical educaAon in Africa!

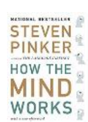
Why we need the 'humaniAes'

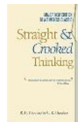
"…educaBon is not just about the passive assimilaBon of facts and cultural tradiBons, but about challenging the mind to become acBve, competent, and thoughfully criBcal in a complex world."

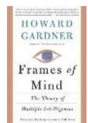


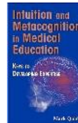
Grappling with complexity – Understanding how the Mind Works…

"….being comfortable with uncertainty, knowing how to ask the right quesBons…." (Quirk, 2011)



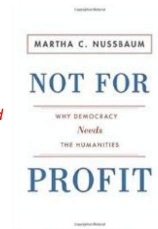






Democracies need the humaniAes

"Art is the great enemy of …obtuseness, and arBsts …are not reliable servants of any ideology…they always ask the imaginaBon to move beyond its usual confines, to see the world in new ways."



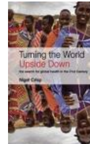
HumaniAes – for 'democracy' and 'close noAcing'

*"The arts and humaniBes are given a central role (i) **poli%cally – in democraBzing medicine**, where the also educate for tolerance and ambiguity, and (ii) **aesthe%cally** – in…learning how to communicate professionally and… how to engage in **close no%cing in physical examina%on and diagnosis**."*

3. BidirecAonal learning

HippocraAc oath example -University of Namibia SoM adapted at US medical school (VUSM).

"We vow to honor and respect life on earth, in all forms, crawling and reasoning, with intellect or with handicap, to be ambassadors of healthy living and a prosperous future"



Conclusions

1. Africa – a large place with complex cultures, poliAcs legacies (colonialist & other) > no 'once–size–fits–all.'
2. Medical educaAon in Africa spans a wide range of resources and modaliAes in pedagogy, standards/accreditaAon, curricula, admissions, assessment and evaluaAon
3. Key concepts in global educaAon – contexts, interdependence
   - *ConsorBa, alliances, networks* – MEPI, CONSAMS, AFREhealth, CUGH
   - Role of "global health" in driving change global educaAon, research
   - Risks of exporAng 'western' educaAon into local African contexts
4. Problem with competencies in AFrican 'collecAvist' seTngs
5. Ethics of research; capacitaAon; science vs humaniAes

Thank you for your auenAon! QuesAons?

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615–936–5124

Select References

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