

Guideline implementation in developing countries: a testimony from Syria

Challenges, Strategies, and Success Stories

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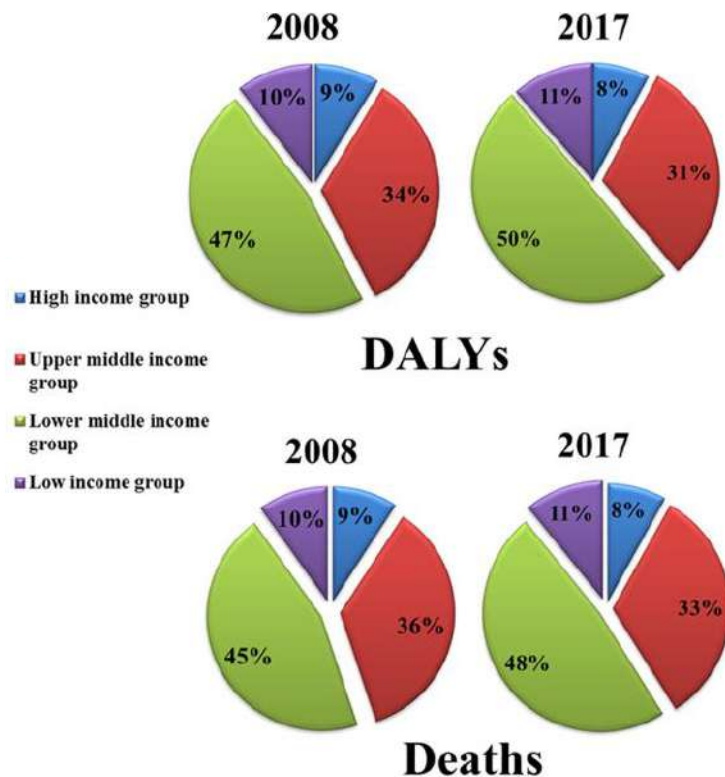
Conflict of interest



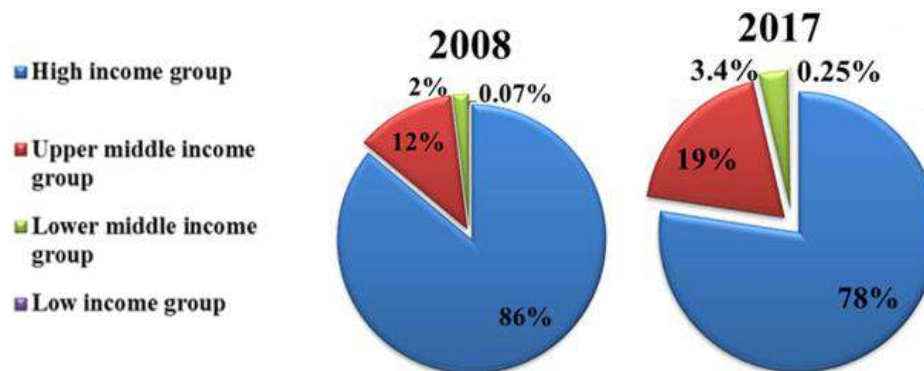
Nothing to declare



Low- and middle-income countries account for the majority of DALYs and mortality from CVD worldwide



Contribution to 10 years of CV research achievement

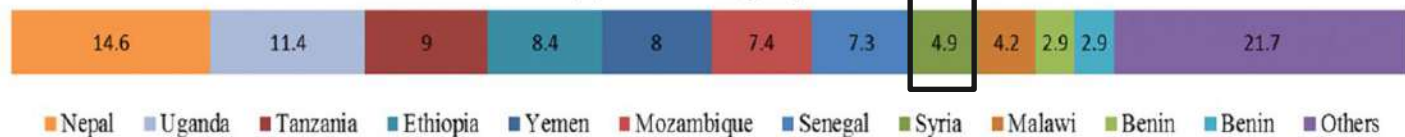


10 Publications !

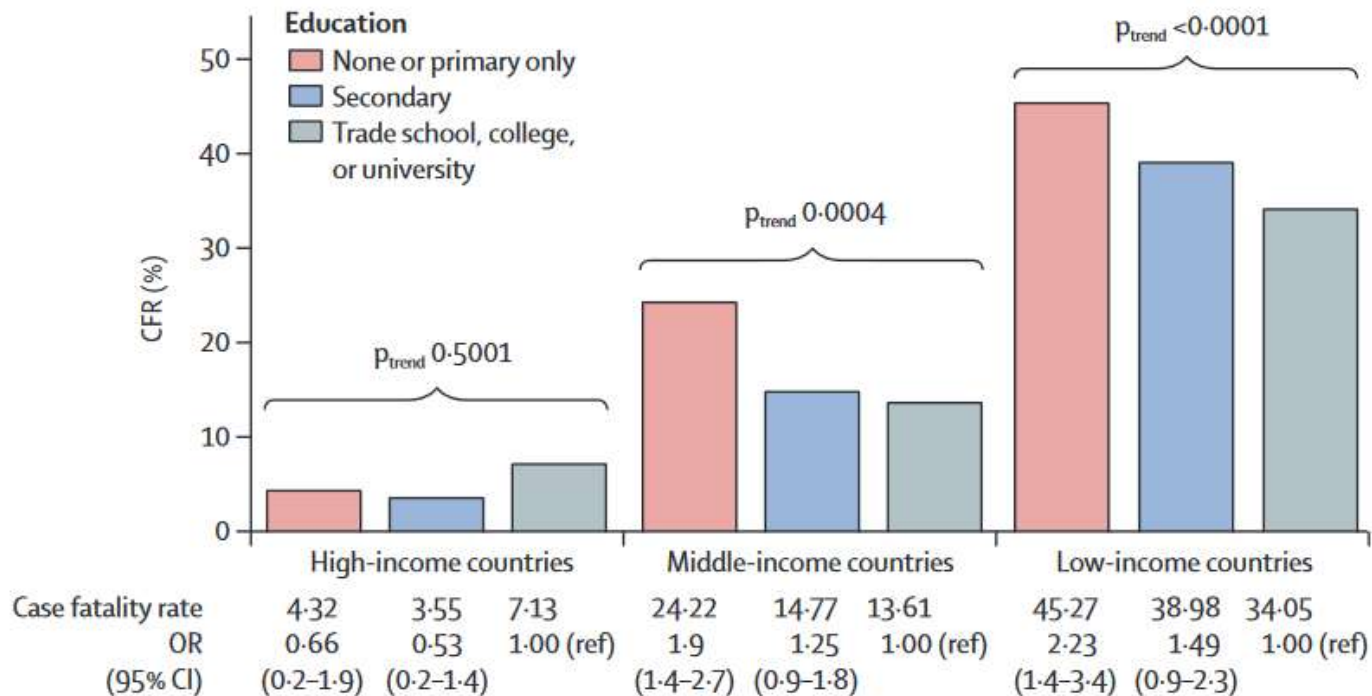
(C) Lower-middle income group



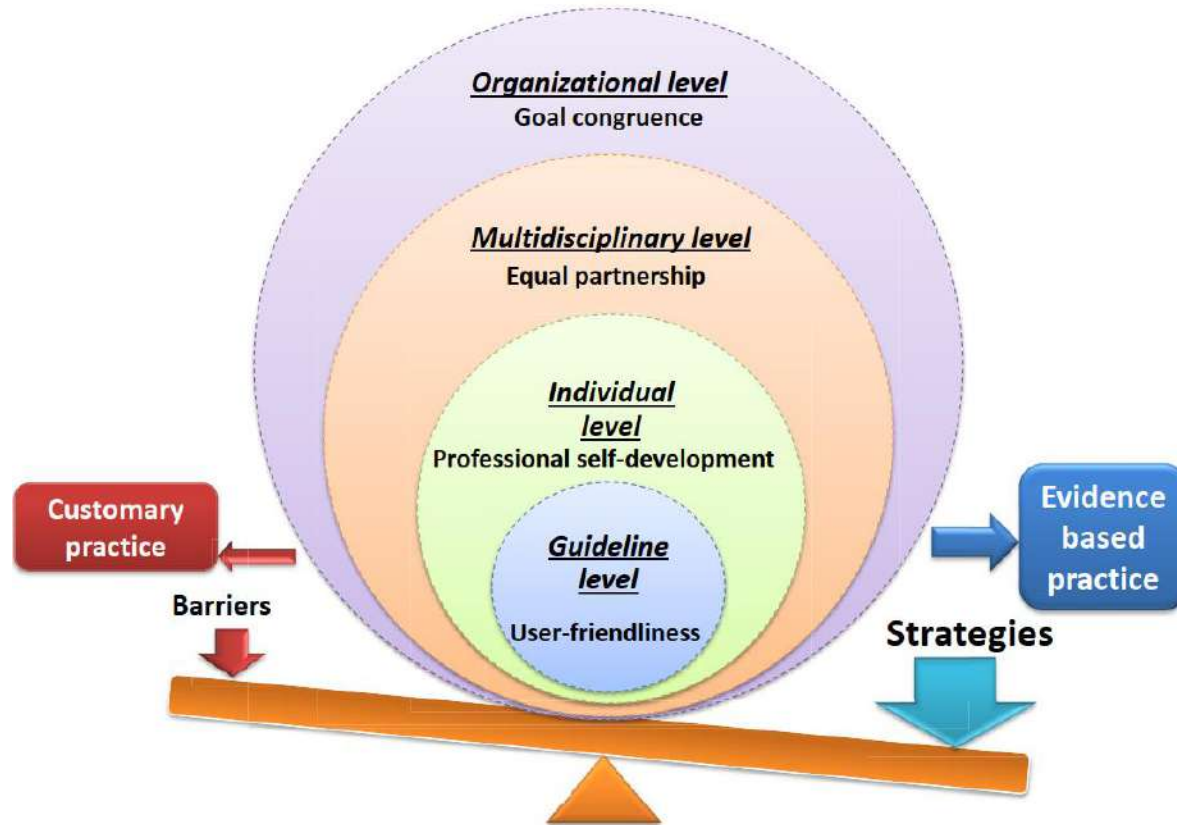
(D) Low income group



28-day CFR after a first CV event by income and level of education



Preconditions for Successful Guideline Implementation



Barriers to implementing clinical practice guidelines



Guideline-related factors

Complexity (too theoretical)

Access to guideline

Lack of applicability

Barriers to implementing clinical practice guidelines



Personal factors
(related to physicians'
knowledge and attitudes)



Barriers to implementing clinical practice guidelines



Personal factors
(related to patients'
knowledge and attitudes)

Lack of awareness and knowledge

Lack of adherence

Financial issues

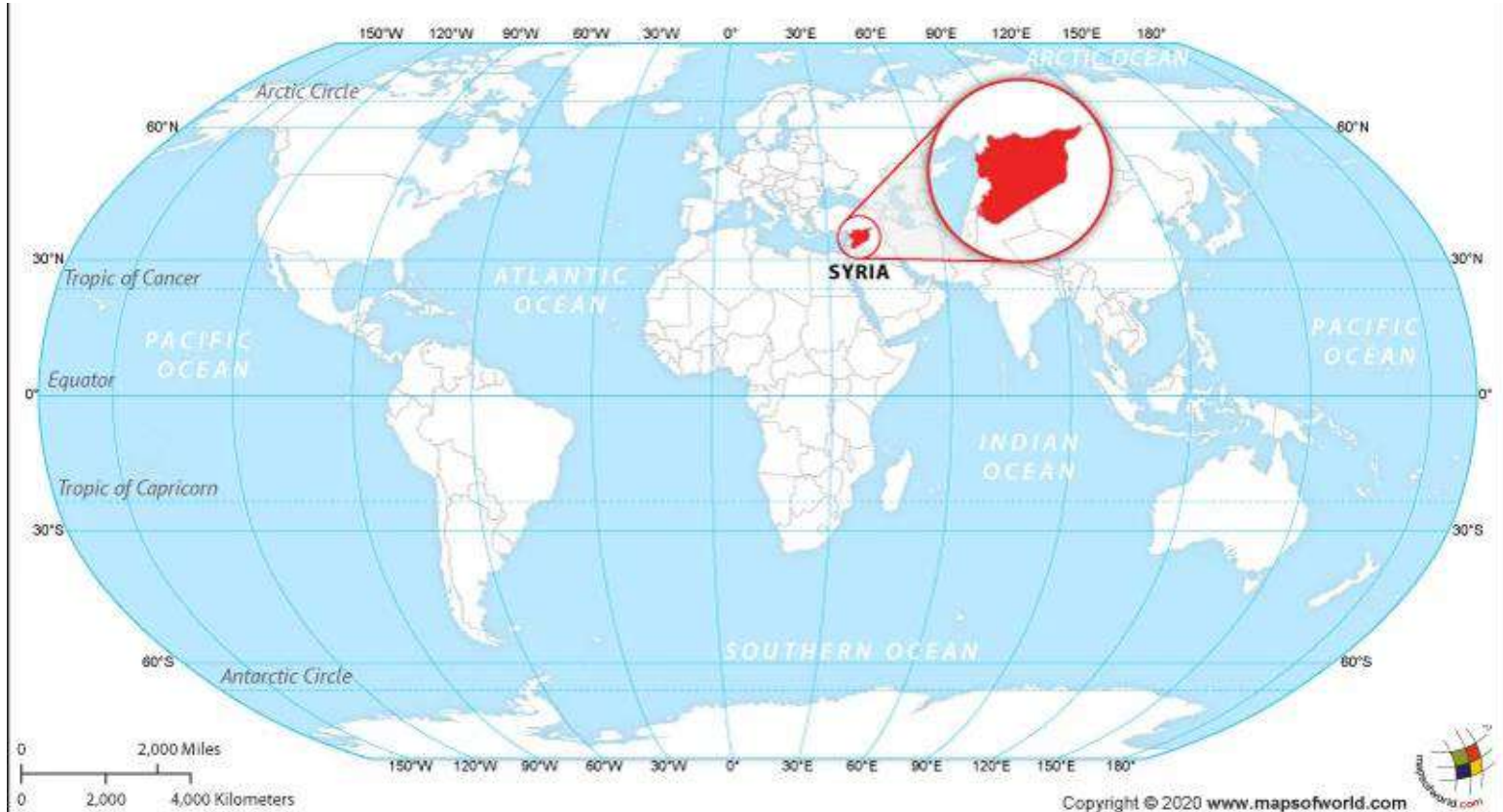


**Institutional environment
and resources factors**

Infrastructure and system gaps

**Lack of epidemiological data for
the region**

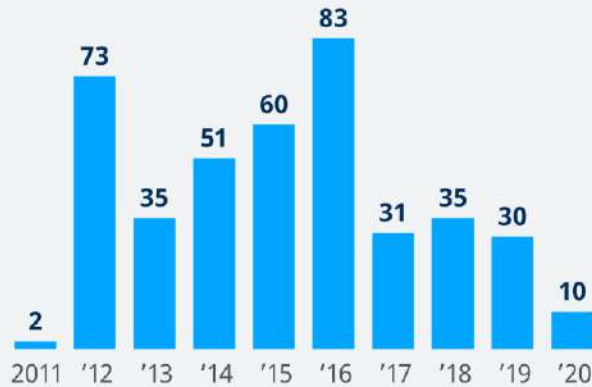
**Lack of financial incentives for the
healthcare practice or professional**



Key numbers behind the war in Syria (2021)

Attacks on Syrian hospitals

As documented by the Syrian Archive



Source: The Syrian Archive

387,000



Number of people killed

200,000



Number of people missing



Share of Syria controlled by the regime in March 2021

Number of Syrians living in extreme poverty



2m

Number of Syrian refugees



5.6m

Number of Syrians internally displaced



6.1m

Number of Syrians requiring humanitarian assistance



13.4m

Economic cost of the war

€1 trillion

ESC HEART FAILURE

ESC Heart Failure 2022; 9: 4003–4009

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ORIGINAL ARTICLE



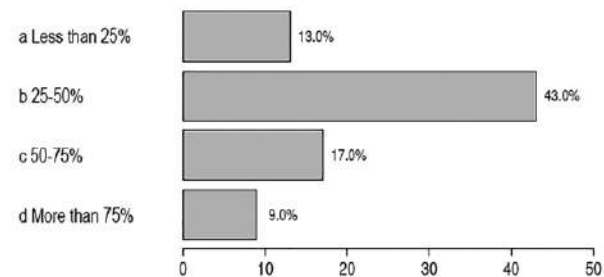
Application of recommended therapies among patients with heart failure during the Syrian conflict: reality and barriers

Amr Abdin^{1,2*}, Amer Barakat^{1,3}, Ahmad Rasheed Alsaadi^{1,3}, Asim Katbeh^{1,4}, Yassin Bani Marjeh^{1,4}, Tarek Bekfani⁵ and Mhd Nawar Alachkar^{1,6} 

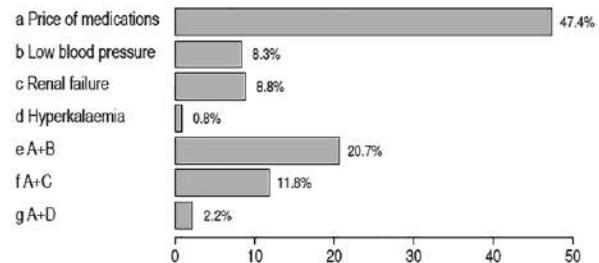
¹Syrian Cardiovascular Association, Damascus, Syria; ²Department of Internal Medicine III, Cardiology, Angiology, Intensive Care Medicine, Saarland University Medical Center, Saarland University, Saarbrücken, Germany; ³Cardiology Department, Al Mouwasat University Hospital, Damascus, Syrian Arab Republic; ⁴Al Bassel Heart Institute, Damascus, Syrian Arab Republic; ⁵Department of Internal Medicine I, Division of Cardiology, Angiology and Intensive Medical Care, University Hospital Magdeburg, Otto von Guericke-University, Magdeburg, Germany; and ⁶Department of Cardiology and Vascular Medicine, Klinikum Coburg, Coburg, Germany

Proportion of HFrEF receiving the 4 foundational HF drugs

(A)

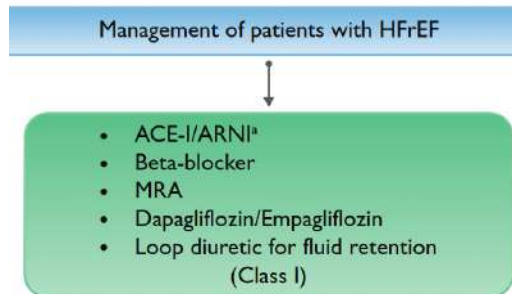
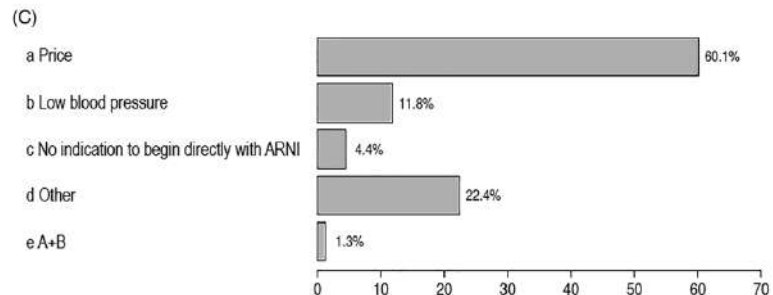
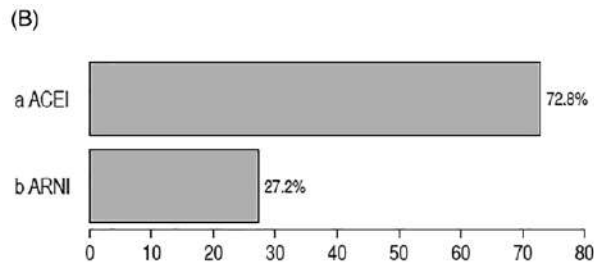


(C)



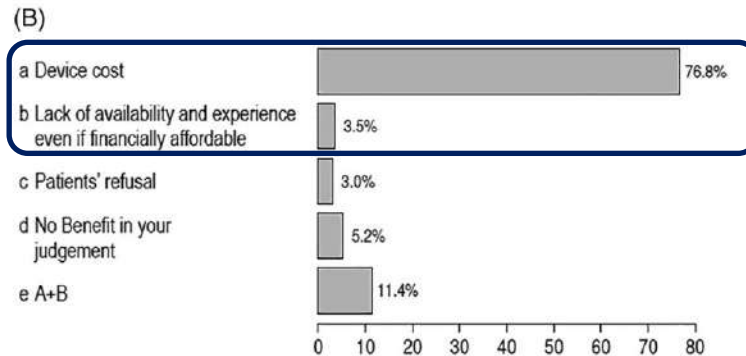
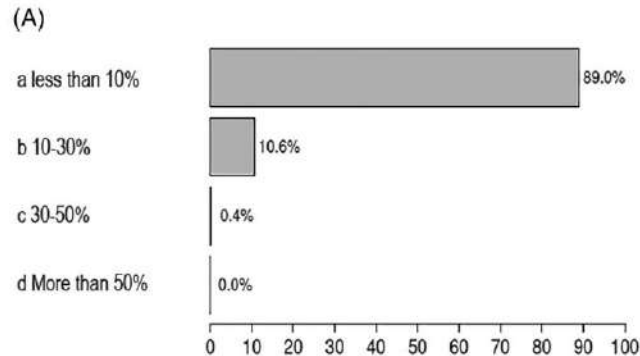
Reality and barriers of application of ARNI in HF patients ESC

When diagnosing a patient with HFrEF, do you start with ACEi or ARNI ?

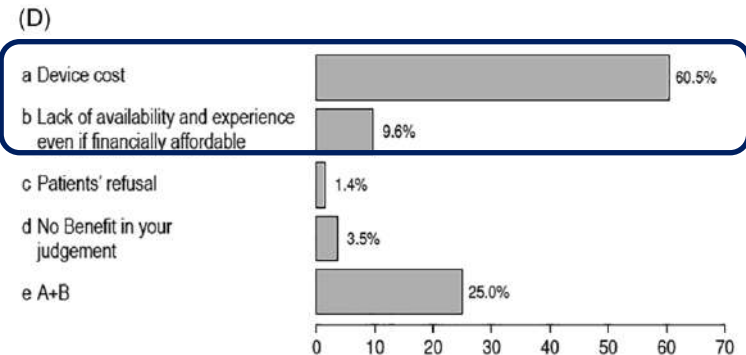
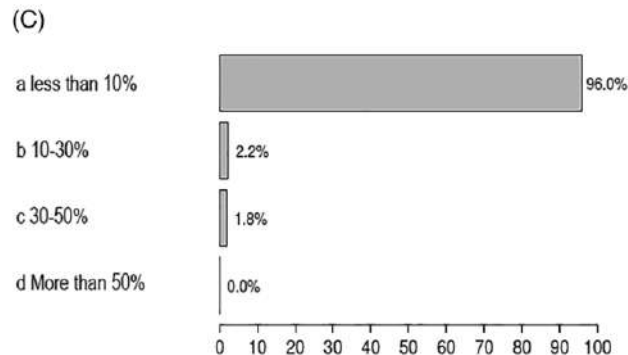


Reality and barriers of application of devices treatment in HF patients

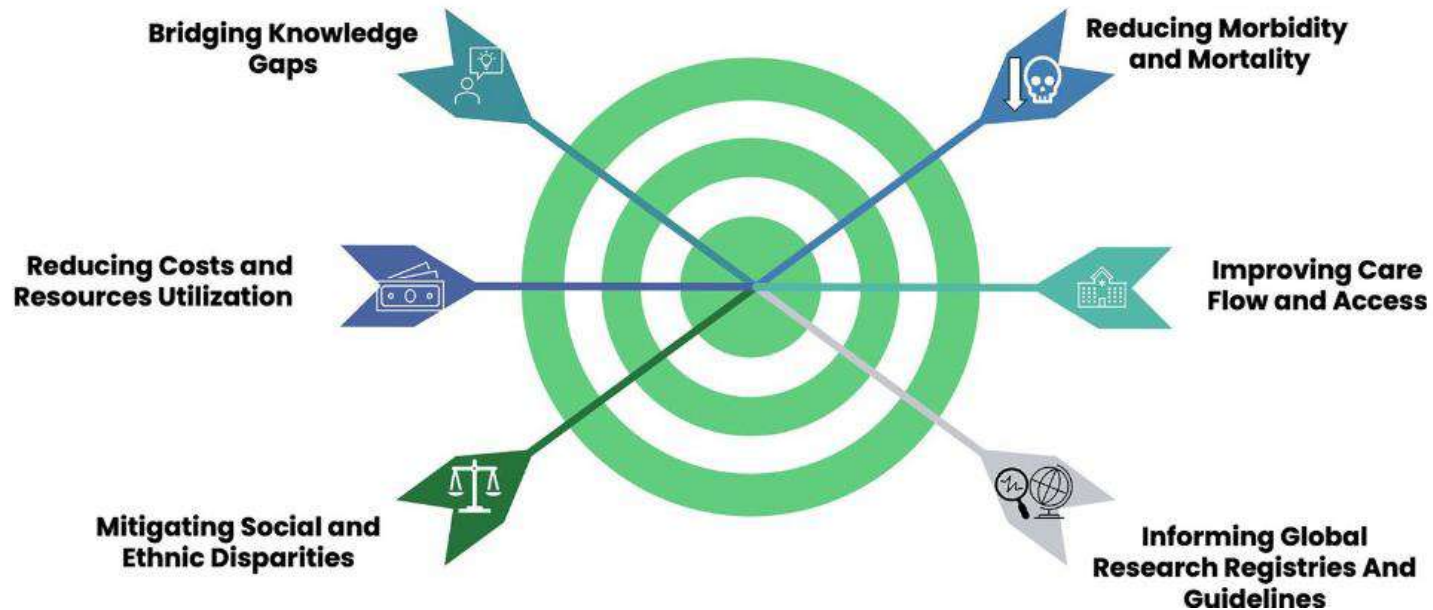
ICD



CRT



Bridging gaps in cardiology practice



Message of hope from a country at war: The Syrian Cardiovascular Association is revived again after 7 years of inactivity

Educational Events for Young Cardiologists

✉, Asim Katbeh, MD ✉

Volume 40, Issue 3, 14 January 2019, Pages 233–234, eurheartj/ehy830 2019

Damascus 08/2020



Damascus 07/2021



Aleppo 03/2022



Damascus 01/2022



Damascus 11/2019



Aleppo 08/2023



Educational Materials in Arabic



Social Media Activity



Global Spotlights

Syrian Cardiovascular Association: Small Steps towards a Bright Horizon

Amr Abdin, MD, FESC, FHFA¹, Asim Katbeh, MD, PhD, FESC and Yassin Bani Marjeh, MD²; On behalf of the Syrian Cardiovascular Association

¹Syrian Cardiovascular Association, Damascus, Syria, University Hospital Saarland, Homburg, Germany; and ²Syrian Cardiovascular Association, Damascus, Syria.

Two years ago, we happily reported that our Syrian Cardiovascular Association, after 7 years of war, had been reactivated on the international stage.¹ Additionally, we introduced our new Syrian Heart Failure (HF) working groups. These were the first steps towards our shared dream.

In 2019, and despite the many obstacles facing our country, our HF Working Group participated in the HF awareness days. Our activities took place from the end of April until the end of May. In cooperation with the Syrian Young Cardiovascular Association, we organized educational meetings for the young



Figure 1 The Syrian HF working group participation in the ESC HFA National Summit: 2019 in Croatia.

Syrian STEMI registry

Patients' medical history

Pat. ID:
 Age (year):
 Gender (1: male, 2: female):
 Height cm: Weight kg:
 Hypertension (0 no, 1: Yes):
 Smoking (0: no, 1: current, 2: Former):
 Hypercholesterolemia (0no, 1: yes):
 DM (0: no, 1: yes):
 AF (0: no, 1: yes):
 Prior MI (0: no, 1: yes):
 Prior HF (0: no, 1: yes):
 Prior PCI (0: no, 1: yes):
 Prior CABG (0: no, 1: yes):
 Prior fibrinolysis (0: no, 1: yes):
 PVD (0: no, 1: yes):
 COPD (0: no, 1: yes):
 Stroke or TIA (0: no, 1: yes):
 Chronic kidney disease: (0: no, 1: yes):

Blood values:

Hemoglobin:
 Creatinine:
 Trop:
 CK:
 Platelets:
 INR:
 PTT:
 Na+:

K+:
 TSH:
 CRP:
 Glucose:

At presentation:

Heart rate (bpm):
 BP (mmHg):
 Time from onset of symptoms to first medical contact (min):
 Time from onset of symptoms to arrival at the hospital (min):
 Cardiac arrest between onset of symptoms and arrival at the hospital (0: no, 1: yes):
 Pre-hospital aspirin (0: no, 1: yes):
 Pre-hospital heparin (0: no, 1: yes):
 Ongoing chest pain (0: no, 1: yes):
 VT or VF at arrival to hospital (0: no, 1: yes):
 mechanical complication of MI (0: no, 1: yes):
 Acute heart failure (0: no, 1: yes):
 Rhythm (Sinus: 1, AF: 2, Paced: 3):
 ST elevation (Leads 7):
 LBBB (0: no, 1: yes):
 Therapy at admission:
 Aspirin (0: no, 1: yes):
 UFH (0: no, 1: yes):

Global Spotlights

When technology innovation is the only path to treat patients in economic crisis countries: the Syrian experience

Amr Abdin^{1,2*}, Asim Katbeh¹, and Yassin Bani Marjeh^{1,3}

¹Syrian Cardiovascular Association, Al-Jalaa Street, P.O. Box 8487, Damascus, Syria; ²Department of Internal Medicine III, Cardiology, Angiology, Intensive Care Medicine, Saarland University Medical Center, Saarland University, Kimberger Strasse 100, Homburg, Saarbrücken 66421, Germany; and ³Cardiology Department, AI Basel Heart Institute, Dummer Housing Area – 9th floor, Damascus, Syria

Four years ago, we happily reported that our Syrian Cardiovascular Association, after 7 years of war, had been reactivated on the international stage.¹ Additionally, we introduced our new Syrian Heart Failure (HF) and Syrian Young Cardiovascular Association

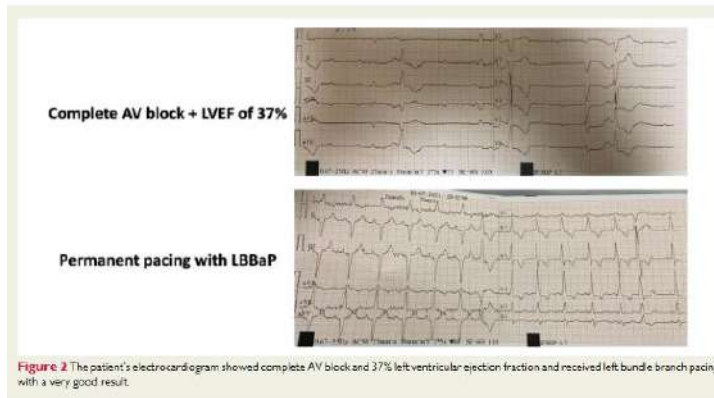
working groups. These were the first steps towards our shared dream.

During the last 4 years and despite the many obstacles facing our country, our association in co-operation with Syrian HF and young

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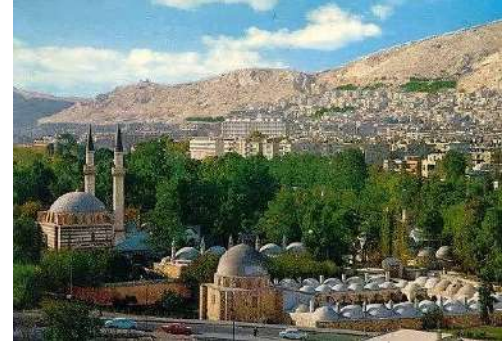


Figure 1 The team of doctors from Germany and Syria who implanted the first two left bundle branch pacing cases in Syria.



Conclusion

- There are wide range of barriers to implementing CPGs recommendations in primary care settings
- The barriers involve different levels (healthcare system, organisational and individual level)
- All the implementation strategies need to be conducted based on a full consideration of the social, cultural and community contexts to ensure the success and sustainability of CPGs implementation.
- In considering these aspects, stakeholders must be included in order to reveal barriers and to develop adequate strategies for guideline implementation



Thank You !

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