Teaching BLS to School Children

Julije Meštrović
School of Medicine Split
PICU, University Hospital of Split
Split
Peter Safar
Airway
Check Breathing

Rescue breaths
Circulation

Pulse check

Chest compressions
Causes of cardiac arrest

Heart disease

Respiratory failure

Circulatory failure (shock)
ADULTS: heart disease

EKG: ventricular fibrillation
Causes of cardiac arrest in children
Cardiac arrest in children
Airway Obstruction
Respiratory Depression
Alveolar Failure
Resp to irary Flu air
Respiratory Failure
Chest Wall Failure
Circulatory Failure

Fluid Loss

Fluid Mal-distribution

Heart Failure
Survival rates of sudden cardiac arrest victims who receive early CPR are significantly increased compared to survival rates of those who receive late CPR.

**Early CPR:** bystander initiated CPR

**Late CPR:** EMS initiated CPR
Most laypeople are unlikely to perform CPR

Inadequate knowledge

Mouth to mouth ventilation to a stranger
Willingness to perform CPR to children is high.

Many children do not receive resuscitation because potential rescuers fear causing harm.
CPR guidelines have been simplified

To improve retention
Increase its appeal to the lay rescuer
International Liaison Committee on Resuscitation (ILCOR)

Every 5 years
2015. Guidelines
CHILDREN: chest compressions : ventilations

Lay rescuers 30 : 2

The same as the adult guidelines
Rescuers who are unable or unwilling to provide mouth-to-mouth ventilation should be encouraged to perform at least compression-only CPR.
Single trained rescuer 30 : 2
2 trained rescuers 15 : 2
Hemodynamic Response to 15 Chest Compressions During Ventricular Fibrillation
Life Support Course for Nurses
Medical students
Injuries

the leading cause of death for children throughout the world
Primary brain injury
Secondary brain injury
AMERICAN ACADEMY OF PEDIATRICS

POLICY STATEMENT
Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of All Children

Committee on Pediatric Emergency Medicine

Role of Pediatricians in Advocating Life Support Training Courses for Parents and the Public
Children aged 13-14 performed compressions as well as adults.

Hands-on practice performed Better CPR than those in the computer program group.

Programme should not exceed 4 h.
Conclusion Our study showed that in Croatia both students in their last two years of primary school and their parents had a positive attitude toward BLS training in primary schools.
Plan of education in elementary schools

Education of professors (educators)
Education of 13 – 14 year-old students

1. Education of students

2. Test

4. Re-evaluation of skills retention after six months
Teaching professors
Students trained by their professors
Test chest compressions
depth
30 compressions : 2 ventilations
<table>
<thead>
<tr>
<th>Resuscitation Procedure</th>
<th>Baseline</th>
<th>After 1st education</th>
<th>After 1 month</th>
<th>After 2nd education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hands position</td>
<td>12%</td>
<td>97%</td>
<td>77%</td>
<td>97%</td>
</tr>
<tr>
<td>Depth of compressions</td>
<td>5%</td>
<td>96%</td>
<td>84%</td>
<td>98%</td>
</tr>
<tr>
<td>Rate of compressions</td>
<td>2%</td>
<td>93%</td>
<td>79%</td>
<td>97%</td>
</tr>
<tr>
<td>CPR ratio</td>
<td>8%</td>
<td>99%</td>
<td>93%</td>
<td>99%</td>
</tr>
</tbody>
</table>
Pediatric Intensive Care Unit
Back to school
Andrija Štampar
The first Secretary of WHO
2 years
50 teachers and 4000 students
Thank You for Your attention!