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The Resuscitation-Registry of the German Red Cross

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A straightforward tool for documenting and analyzing resuscitation procedures performed by volunteer emergency technicians in the German Red Cross.

Volunteer emergency technician of the German Red Cross are often the first responders of a resuscitation scene. They are trained and equipped with semi-professional material.

We aim to collect comprehensive data to obtain crucial insights into resuscitation procedures performed by volunteer emergency technicians. These insights are intended to be utilized for the systematic and targeted advancement of the training, equipment, and organization of volunteer emergency response teams in the German Red Cross.

The German Red Cross (GRC) is the national society of the Red Cross in Germany. It consists of approximately 420,000 GRC volunteers involved in disaster response, youth and welfare programs, and rescue services. Its internal structure primarily follows the federal organization of the Federal Republic of Germany.

In 2010, the GRC introduced the use of laryngeal tubes (LT) as part of the training and operational procedures for entry-level volunteer emergency technicians. The training for volunteer emergency technicians (VET) includes a 48-hour course in emergency rescue and medical techniques, with 10 hours dedicated to resuscitation training, including the use of an automated external defibrillator (AED). ETs come from diverse professional backgrounds, with most of them not having a medical background. Each GRC unit, whether local or regional, has a volunteer physician who supervises the training and daily operations.

The introduction of the laryngeal tube was a widely debated „game-changer" in the qualification of volunteer emergency technicians. Following some emotional discussion, this supraglottic airway device (SGA) was also adopted by most other emergency response organizations. Thus far, a comprehensive system for capturing complications in the application of the laryngeal tube has been lacking.

The presented approach constitutes a straightforward and secure data capture method. It relies on the immediate input of data by volunteer emergency technicians following resuscitation. This effectively eliminates the common filtering by organizational entities.

The first resuscitation-registry in Germany for volunteer emergency technician (VET)

We have identified two main issues: firstly, there is currently no comprehensive overview of the frequency at which VETs are involved in resuscitation incidents, and secondly, we need to assess the potential risks associated with the use of LTs by our VETs.

In 2010 we first discussed in the structure GRC regional association Hessen, equal to the federal state Hessen, the possibilities to observe the use, the failures or even the misuse of the LT. With the easy and cheap ways of fax and email we didn´t expect consistent data. For special technical devices we could not find a sponsor.

Digtal questionnaire and data analysis

Since 2018, advancements in digital technology have enabled us to find a simple, cost-effective, reliable, and widely accepted solution for obtaining consistent and reliable data from our VETs.

We have developed a user-friendly online questionnaire using *Microsoft Forms*, which can be accessed by scanning a QR code or entering a short URL. The questionnaire consists of straightforward yes-no options, and additional questions are displayed only when necessary. There are also fields for providing individualized text responses.

The QR code is printed and distributed within the GRC, attached to every emergency backpack. After a resuscitation incident, when the patient is being transported in the ambulance, the VET submits the data through the questionnaire to our database in *Microsoft SharePoint*. The technical infrastructure is supported by *Microsoft Power Automate*. This direct data collection from VETs in the field bypasses any filters imposed by official channels. All software were already in regular all-day use by the GRC administration, thus incurring no additional costs and effort for implementing.

Log in and find out:
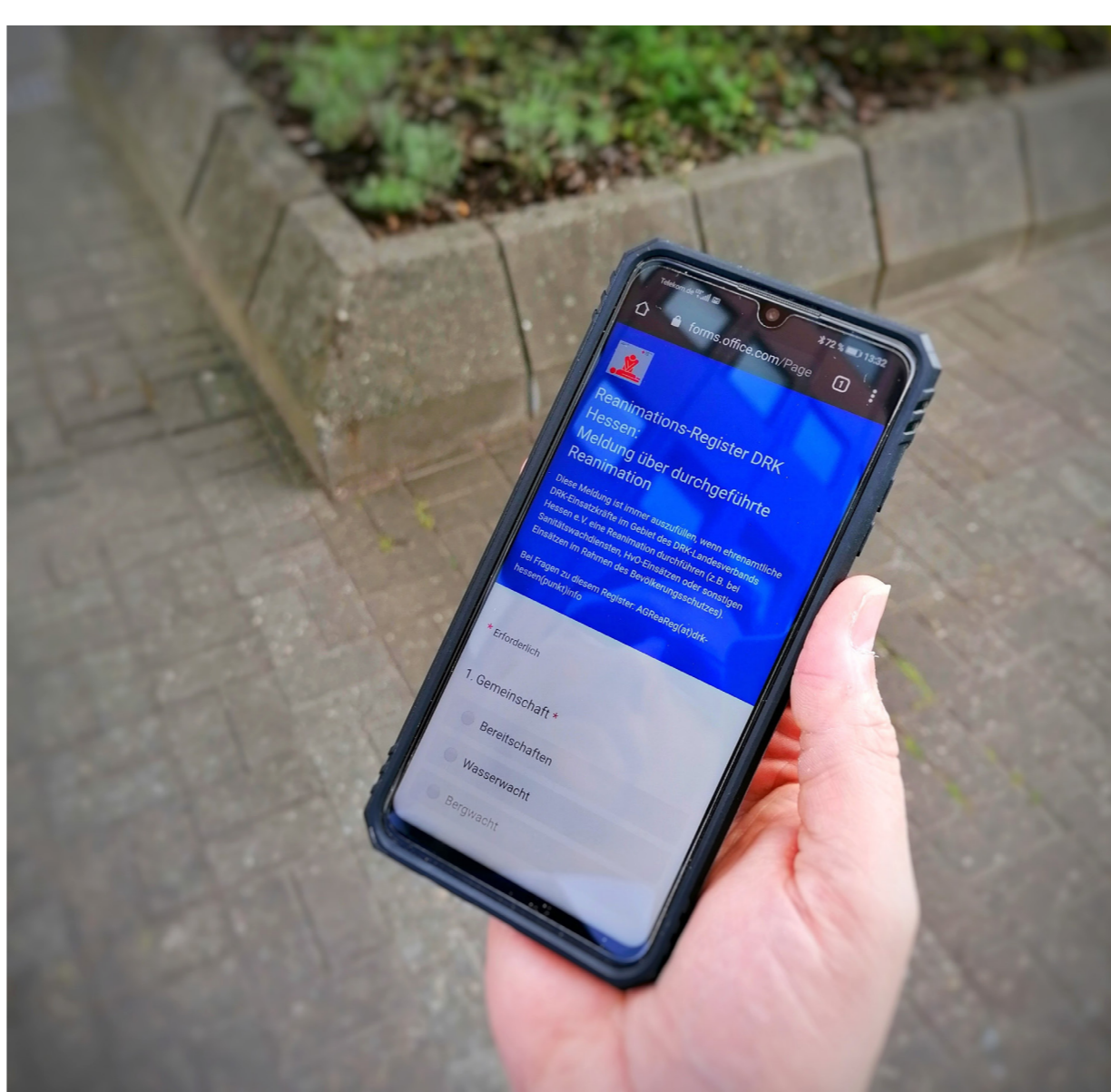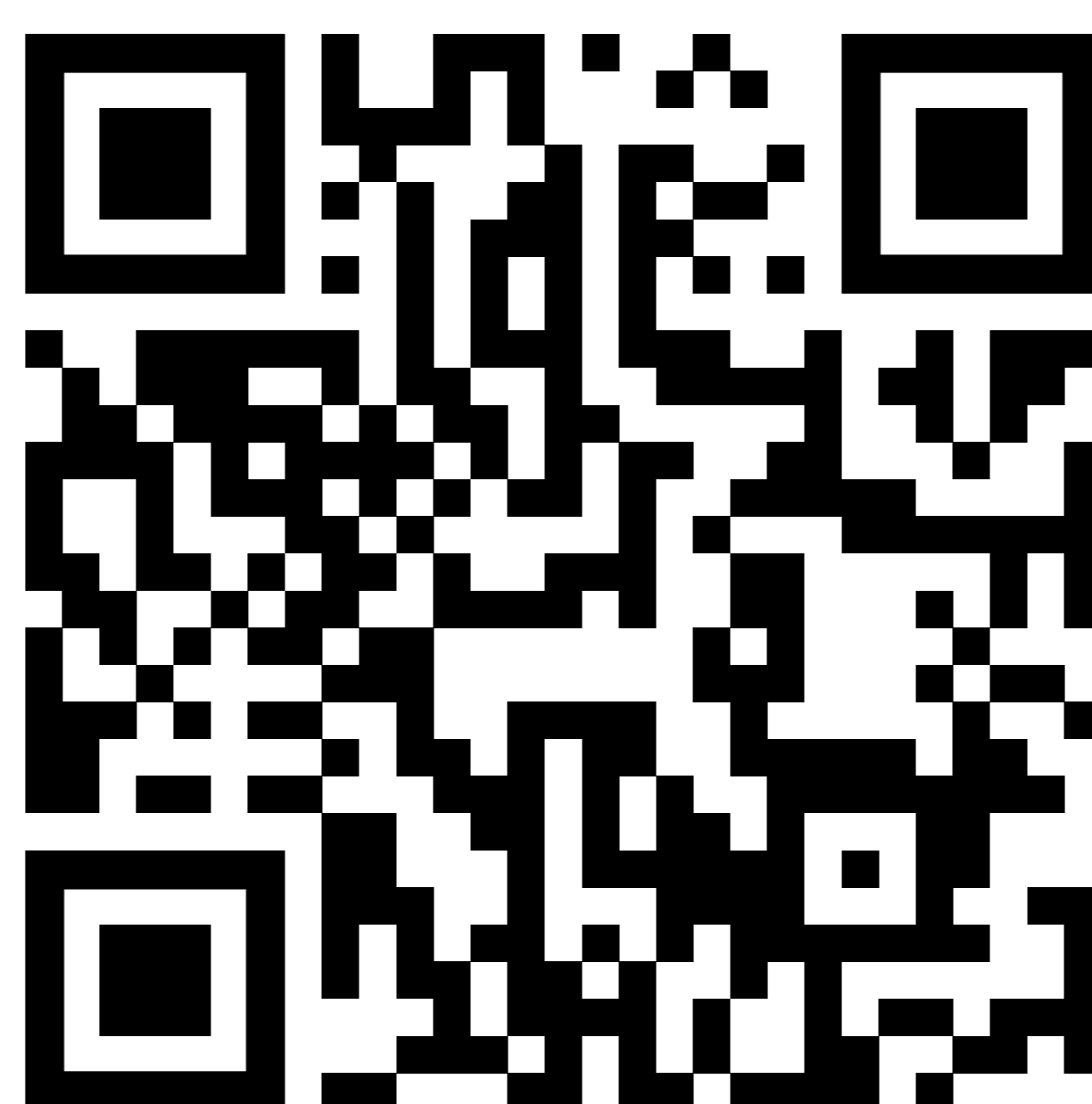
No special technical competencies are required for the administration and maintenance of the technical system. The routine management of incoming reports and the technical system demands only minimal effort. The average weekly workload amounts to approximately 30 minutes.

The questionnaire is publicly accessible in a demo version and can be easily adapted and adopted for one's own organization.

At the outset of the project, the Data Protection Officer of the German Red Cross was actively involved in the project.

Since 2019, the questionnaire has been widely adopted within the VET community, and we have observed a high level of motivation in completing the initial resuscitation data sets for the GRC.

The results are made publicly available and will be presented in an open-access *Microsoft Power BI* dashboard.

The results are evaluated, processed, and interpreted by an expert group on a biennial basis. The findings are publicly disseminated through a project report on the website (www.drk-hessen.de) and are freely accessible there.

Within the German Red Cross, the results are forwarded to all specialized committees, experts, and responsible individuals, making them available for their use. This dissemination within the organization constitutes a key project objective.

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